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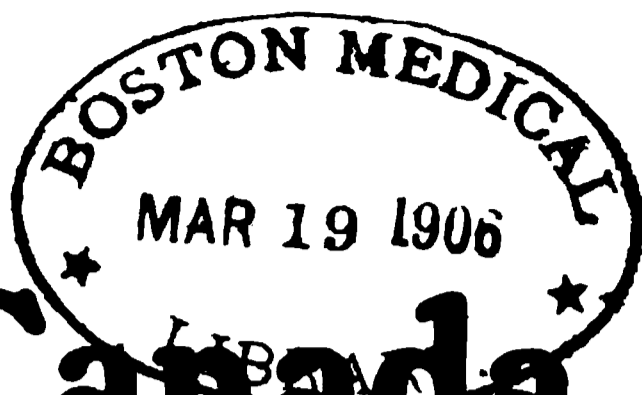
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No. 1

THE INFLUENCE OF THE PLAN ON THE ACCEPTANCE OF RISKS FOR A LIFE INSURANCE COMPANY.

By PERCY C. H. PAPPS, A. I. A.

Actuary of the Manufacturer's Life Insurance Company.

MR. President and Gentlemen: In the early days of life insurance the acceptance of risks lay almost entirely with the Board of Directors. It is said that the old test of the fitness of an applicant was a walk around the board-room table. If the directors considered the applicant to be a healthy-looking individual, his application would generally be accepted.

In course of time the board of directors called in the assistance of the medical directors, who eventually relieved the board of practically all responsibility in regard to the acceptance of risks. The medical directors, in their examination of cases laid before them, often feel that an applicant can hardly be accepted on the plan of insurance applied for, but believe that he would be safely insurable on some other plan. It is then that the actuary is called upon to combine his knowledge with that of the medical directors, in order that the combination of medical and actuarial knowledge may determine the terms upon which the insurance may be granted.

Needless to say, it is not my purpose to try to tell a body of medical men anything about the acceptance of risks from a medical standpoint, but I will endeavor to give a brief account of the acceptance of risks from the standpoint of an actuary.

In order to understand the effect of the plan of insurance upon the acceptance of risks, it is necessary that we should know something of the fundamental principles of insurance. I am aware that the medical directors and many of the local medical examiners have a very fair knowledge of insurance; but, in order to be on the safe side, I will endeavor to explain, as briefly as possible, some necessary points.

* Read at the Ontario Medical Association, June, 1904.

Insurance may be granted under what is known as a yearly renewable term policy. Under such, the insurance is granted from year to year at a constantly increasing premium; each premium being just sufficient to cover the cost of the insurance during the twelve months following the payment of the premium. The premium will be comparatively small when the insurance is first effected, but it will increase each year, so that, if the life lives to old age, the premiums will eventually become prohibitory.

A more popular plan is what is known as the whole life policy. Under this plan, premiums are payable each year, during the life of the insured, and the insurance becomes payable upon his death. The premiums in this case are level premiums, that is they do not increase or decrease. During the early policy years the premiums paid are more than sufficient to pay for the cost of carrying the risk, and the balance is each year set aside and forms what is known as the "reserve."

There are several ways of looking at the question of what this reserve is. For our present purpose I would ask you to consider that, when the first premium is paid, a portion of that premium is set aside towards reserve, so that the amount at risk the first year is the difference between the amount of the insurance and the reserve. When the second premium is payable the reserve is increased, and consequently the amount at risk is diminished. In this way, although the cost of providing a certain amount of insurance increases as the life gets older, the otherwise steadily increasing cost is kept down, owing to the fact that the increasing reserve reduces the amount at risk. This reserve, under a whole life policy, increases with the age of the policy, finally, if the life lives to the oldest age shown by the mortality table, the reserve equals the amount of the policy.

The reserve varies greatly according to the plan of the policy. A one-year term policy provides insurance for the year only, and there is consequently no reserve. The reserve on a five-year term policy only amounts to a few cents per thousand insurance the first year, increases to a maximum at the third year, and vanishes at the end of the fifth year. On the other hand, the reserve on a ten-year endowment insurance, increases each year and amounts to the full face of the policy at the end of the ten years.

This short account of what is meant by the reserve on a life insurance policy will enable us to understand, that the amount which a life company has at risk under any policy is not the face value of that policy, but the difference between the face value of the policy and the reserve on it; and, since the reserve depends upon the plan of the insurance, the amount at risk does also.

When an application is received for a policy on a certain plan of insurance, we must, therefore, consider what the reserve on that policy will be from year to year. We can then tell what amount will be at risk each year, and can thus form an opinion as to whether the plan is one upon which the insurance can be granted. If we consider that there is too much at risk around those ages at which we suspect that there may be an excessive rate of mortality, we must change the plan to one which shows a smaller amount (if any) at risk around the dangerous ages.

For example, let us suppose that an applicant is applying for a whole life policy at the age of 35, and that there is a strong tendency to, say cancer in the family history. It would be felt that while the life was insurable at ordinary rates for the next twenty years, it would be well to get off the risk around age 55. In such a case the whole life policy would be refused and a twenty year endowment insurance offered. In this way the policy would mature before the life reached the age when the extra mortality would be expected.

If it were thought that there was only a slight tendency to cancer, a twenty payment life policy might be offered. In this case, although the policy would not mature at the end of the twenty years, still, as all the premiums would have been paid in by that time, the reserve on the policy would be considerably higher than on the whole life policy, and the amount at risk at the end of the twenty-years would consequently be less.

On the other hand, if there was a history of tubercular trouble in the family, and the applicant was of good physique, a policy would probably be granted on the whole life plan ; but as, on the average, a heavier mortality would be expected in the early years of the policy, owing to the tubercular history, a lien or contingent debt would be placed upon the policy remaining level for perhaps five years, and then running off in equal instalments during perhaps the next ten years. If the life dies during the first fifteen years from any cause other than accident, the amount of the lien standing against the policy at the date of the death of the insured, would be deducted from the face of the policy in paying the claim. In this way only the poor lives pay any extra premium, and this is one of the strongest arguments in favor of the lien system.

The British practice of meeting the case of a sub-standard life of, say, 35 years of age, who applied for a whole life policy, is to accept the life and grant a policy on the plan applied for ; but the policy would be issued at a premium as for a life aged perhaps 40 years, instead of 35. This is what is meant by "rating up a life five years."

A moment's consideration will show that the method of rating up lives a certain number of years, provides for an increasing extra mortality. This plan is only satisfactory in certain cases where an increasing extra mortality is expected, and it is now very seldom, if ever, used in Canada or the United States.

So far as we in Canada are concerned there are but two methods generally in use for the acceptance of sub-standard lives. The first is that of changing the plan of insurance ; the second is that of imposing a lien. We might add a third which is simply a combination of the two just mentioned.

A method now used by at least one of the big American companies is that of issuing policies to sub-standard lives at the regular with-profit rates of premium, but the policies are placed in a special deferred dividend class. The profits, which will be paid on those policies, will depend upon the rates of mortality experienced by the policies in that class. Needless to say, the formation of a special class for sub-standard lives would only be feasible where the business of the company was sufficiently extensive to warrant there being a sufficient number of lives in the special class to give average results.

I might give some actual examples of the application of the lien system, or of changing the plan of insurance, but the two or three cases I have mentioned will illustrate the principles to be followed. The amount of lien to be imposed in any particular case can only be learned by experience, and is, to a great extent, a matter of guess-work. We have not at the present time any statistics to tell us just what extra rate of mortality we may expect in every case of doubtful family history, etc.

It may be well to point out that, while the imposition of a lien will cover some cases, and the changing of the plan will allow us to accept other cases, still, the imposition of a lien is not equivalent to changing the plan, nor *vice versa*. If a man applies for a whole life policy, and the medical board offers the applicant his choice of a whole life policy subject to a lien of 50 per cent. of the face of the policy, decreasing by 2 1-2 per cent. for twenty years, or a twenty-year endowment policy without any lien, one of the offers would be improper in most cases. If the extra mortality is expected in the early policy years, the life policy with the lien covers the case ; for if death occurs in the early years the lien is deducted from the face of the policy when paying the claim, and if the insured lives beyond the ages when the extra mortality is expected, the policy will then be free from debt, and on the same footing as any similar policy granted to a first-class life. The twenty-year endowment policy does not cover an extra mortality in the early policy years, as the

largest amounts are at risk in the first years, and there is nothing at risk in the twentieth policy year. If the mortality in the later years is expected to be heavy, the twenty-year endowment fits the case: for, as just mentioned, the amount at risk is greatest in the first year, and it gradually decreases, so that finally there is nothing at risk in the twentieth year. The life policy, subject to a lien, will not cover the case where a heavy mortality is expected in the later years, as by that time the lien will have run off.

Occasionally a life is so much below the standard that it is not insurable on any ordinary plan. The actuary will then very often endeavor to arrange some special plan that can be safely offered. The offer of a modified plan is apt to cause much less annoyance to the agent and the applicant than a simple refusal to accept the application. A twenty-year pure endowment policy with the return of the premiums paid in the event of death during the twenty years, is an example of a special plan that can be offered to a decidedly poor risk. If the applicant lives for, say, ten years, the company has the interest on the premiums paid, which will be sufficient to offset the expenses, provided the commissions are properly adjusted. If the applicant lives to the end of the twenty years, the full face of the policy is payable. Under this plan, therefore, the company can lose very little by the early death of the applicant, and he will have the satisfaction of maturing his investment if he lives to the end of his twenty years.

Apart from sub-standard lives, we have cases of lives which are first-class, from a medical standpoint, but which on account of being engaged in a hazardous occupation, require to be carefully dealt with by the actuary. An extra premium, varying from \$2.50 to \$10.00 per \$1,000 insurance is usually imposed to cover the extra risk caused by hazardous occupations. Some companies accept lives engaged in hazardous occupations at ordinary rates, and place these policyholders in a separate class, where the dividends will depend on the mortality actually experienced in that class.

I must now refer to one investigation which will, no doubt, have an effect on the acceptance of risks, namely, what is known as the "Specialized Mortality Investigation." This is the experience of thirty-four Canadian and United States companies, upon ninety-four special classes of risks, which was compiled by the Actuarial Society of America. A mortality table, which was thought to represent fairly the mortality of standard lives in America, was chosen as a basis of comparison for the results of each of the classes. The ages of entry were grouped into four classes. Ages 15 to 28 were referred to as young entrants; 29 to 42,

mature entrants ; 43 to 56, elderly entrants ; and 57 to 70, old entrants. The experience is also divided into the first five years of insurance, and from the sixth to the thirteenth years. Roughly speaking, the first group of years will include those where the mortality will be comparatively light, owing to the effects of the medical selection ; and the second group will contain the years after the effects of selection have worn off.

As the result of the investigation of the mortality of these various classes is very interesting, I will now quote from the report of the Committee of Actuaries who had charge of the investigation :—

Lives insured for \$20,000 or more on one application, notwithstanding the care always taken in the selection of such risks, have shown a heavy mortality, except at young ages at entry, the old entrants being the worst lives.

Lives insured for smaller amounts than applied for have turned out to be bad risks ; while persons insured on a different plan than the one applied for, so as to require the payment of a higher rate of premium, were much nearer the normal.

Men born in Germany were good risks at young ages at entry, but poor risks at older ages of entry.

Persons born in Ireland proved poor risks during the first five years of insurance, but good risks after that time. The difficulty would appear to be one of circumstances rather than race, and the matter needs further investigation.

Lives born in Sweden and Norway have been excellent risks.

Colored people show up well after being insured five years, but poorly during the first five years. It must be remembered that great care has been taken in the acceptance of these risks.

Army risks in time of peace have not proved satisfactory. Officers in the navy have proved unsatisfactory at all ages. Civil officers, such as sheriff, marshal, police constable, etc., show unfavorable results except upon old entrants.

Members of paid fire departments in cities have been unfavorable risks.

Physicians show an improvement over earlier statistics. Those insured below age 43 have proved good risks, but the result has been unfortunate upon the physicians insured at ages over 42. These remarks apply both to the earlier and later years of insurance.

Lives exposed to electricity, engaged in sawmills, working in iron and steel at high temperatures, house painters, printers, tailors, butchers, and meat dealers, travelling salesmen, such of them as heretofore have been accepted for life insurance, have proved good risks, in spite of the supposed hazardous nature of the occupations.

Steel grinders and glass workers have proved unprofitable risks.

Potters are, on the whole, favorable.

Laborers show a heavy mortality, except at young ages at entry.

Contractors are good risks at young ages at entry, poor risks at older ages.

Lives engaged in theatrical occupations exhibit a very high mortality.

Cattle dealers and drovers have proved no worse than the average, excepting the old entrants.

Hotel-keepers, not attending bars, and wine and liquor dealers, who warranted it to be true that they were total abstainers, have proved to be poor risks. Those dealers who did not warrant that they were total abstainers have proved to be still worse risks; while still worse, on the whole, are the brewers and their employees. On the other hand, distillers and their employees may also be regarded as good risks, at least during the early years of insurance, the experience being less favorable after five years.

Railway passenger conductors show a mortality only slightly above the expectation. Railway express messengers exhibit favorable results, and railway mail clerks have been excellent risks.

In gathering statistics of railway passenger trainmen, only those lives insured since 1890 have been taken, in order to exclude those lives operating trains not fitted with modern appliances. The results of the limited experience taken have been decidedly bad.

Locomotive engineers show bad results, while locomotive firemen are still worse risks.

Bad results have been experienced upon officers of ocean steam-vessels; while the losses upon officers of sailing-vessels on ocean or great lakes have been still more heavy. The losses upon seamen and fishermen have not been excessive, except for young ages at entry. The small class of pilots has turned out well.

Lives who have been accepted for insurance notwithstanding an intermittent or irregular pulse have proved to be good risks at the younger ages, but not so good at the older ages.

Those who have been accepted, with more or less doubt, notwithstanding a pulse rate below sixty per minute, have proved to be extraordinary good risks at all ages of entry and for all durations of insurance.

Lives who have been insured after having reformed from intemperate habits show bad results, notwithstanding the extreme care taken in the acceptance of these risks.

Asthmatics appear to be good risks, except at the older ages of entry.

The care with which medical selection has discriminated against risks giving a recent history of inflammatory rheumatism, is witnessed by the results. Those who have had one attack have proved to be fairly good risks, except as regards older entrants, while those who have had more than one attack have not been satisfactory risks, except as regards young entrants.

The mortality amongst lives showing a record of gout is only slightly excessive within the first five years of insurance, but is afterwards nearly double the expectation.

Applicants with a history of syphilis show an almost equally bad record.

Contrary to expectation, those who have had otorrhoea appear to be good risks.

Those who have had hepatic colic show a favorable mortality, except for old entrants.

Those who have had renal colic, calculus or gravel, have proved good risks at young ages at entry, but poorer risks for mature and elderly entrants, and bad risks for old entrants.

Those who have had inflammation of the bowels, peritonitis or appendicitis, have been decidedly good risks for young entrants, and the elderly and old entrants are only slightly worse than the average.

Where there has been a record of blood-spitting, the old entrants have been good risks, the mature and elderly rather bad, and the young decidedly bad.

Persons who have had disease of the hip-joint have been bad risks at all ages.

Dyspeptic entrants, at the old ages, have been moderately bad risks. All others show good results, except the young entrants of light weight.

With the exception of young entrants, all classes of extra heavy risks have proved most unsatisfactory. Young entrants, whose parents have reached the age of 70 years, are distinctly good. Young entrants, for whom one parent, at least, has been noted as dying below 70, and young entrants having a greater girth of the abdomen than of the chest expanded, appear to be fair average risks. Omitting the young entrants, extra heavy weights have had a mortality slightly greater than 50 per cent. above the expectation, with the exception of those whose parents have both reached the age of 70 years, where the mortality has been slightly less than the above figure.

Those lives classed as heavy-weights, though not as heavy as the lives just mentioned, have shown exactly similar results, but the extra mortality has not been as high as in the case of the extra heavy weights.

Lives of ordinary weight, whose parents have both died below 60, have been fairly satisfactory for young entrants, but unsatisfactory for older ages at entry. Lives whose parents have both attained the age of 75, have proved to be good risks.

In lives of standard weight, where at least one parent has died below 70 of phthisis, the results have been good. The same is true, where, at least, one parent has died below 70 of some form of kidney disease, except that the elderly entrants of this latter class have not done well after five years. Where one parent has died below 70 of heart disease, the results have been good, except that the elderly and old entrants appear to be worse after five years. Where one parent has died below 70 of apoplexy or paralysis, the results have been good for young entrants, but not so favorable for older entrants. The cases just mentioned have been lives of older entrants.

In cases of light weight, the results, on the whole have been quite favorable. Where at least, one parent has died below the age of 70 of any kind of disease of the lungs, the young entrants have been decidedly bad risks, the entrants of other ages have proved good risks. All other light weights have proved to be uniformly good risks.

Persons over six feet three inches in height have been good risks for young ages at entry, but bad risks for older ages; and unusually short men have shown similar results.

Where any near relative has died of cancer, the results have been good, except at older ages at entry.

Persons who have had any near relative develop insanity have been good risks, except for the elderly entrants, who show an excessive mortality after five years.

The remaining classes of lives consist of persons insured in select, counties of the United States.

The committee points out that care should be exercised in drawing any conclusions from these results. They state that: "One necessary warning cannot be expressed too strongly. It must not be forgotten that the facts herein given relate to the respective classes of risks among lives selected for insurance, and do not relate to the same classes among the general population.

"For example, it is not conceivable that among the general population those who have had, at least, one parent dying of consumption, are above the average of the others in vitality. If this is found to be the case as regards that particular class of insured lives, it indicates only that such persons of that class as have actually been accepted for insurance have been selected so carefully that, on the whole, those only have been

accepted who are peculiarly good representatives of the class. If, on the other hand, the results appear only moderately bad upon a class of risks heretofore accepted with great circumspection, it is to be inferred that had such circumspection not been exercised the results would have been still worse. This warning must be borne in mind as applying and intended to apply to each one of the classes under consideration."

In conclusion, Mr. President and Gentlemen, let me thank you for the honor which you have done me, in inviting me to prepare this paper, and I trust that it has not been altogether uninteresting to those present.

EXPECTANCY OF LIFE IN MORBID CONDITIONS OF THE CARDIO-VASCULAR SYSTEM.*

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LESIONS of the cardio-vascular system, met with in the course of life insurance work, present much more difficult problems in prognosis than when met with in the consulting room, or at the bedside. In the latter, indeed, the prognosis is usually a comparatively simple matter, the condition having advanced to stages characterized by abundant signs and symptoms, which form ample data upon which to base a forecast. In the former, however, the disease is usually incipient, the latent signs being few, and the symptoms scanty or absent. Again, when the subject presents himself as a patient, he does so with a frank and open mind, willing and anxious to give all the information he can in order to obtain relief. When the object, however, is life insurance, this aid is often denied us; owing either to ignorance, or, it may be, unwillingness on the part of the applicant.

Therefore, it follows that the utmost attention must be given to the diagnosis, and the most careful judgment brought to bear on every case of cardiac disease in which an application for life insurance is made. The problems before an examiner in every such case are first of all to determine whether the heart is performing its function properly at the time; if so, at what cost to itself; and, from this and other circumstances shortly to be mentioned, to say how long this will probably continue. In order that a satisfactory answer to these questions may be obtained, not alone must the condition of the heart be ascertained by the conscientious application of all the routine methods of examination, but the general condition of the patient must be noted, and a searching inquiry made into his family and personal history.

* Read at the Ontario Medical Association, June, 1904.

Among the most important, because most frequent, cardiac conditions upon which medical examiners have to give an opinion, are the various valvular lesions. It is proper, therefore, that we should primarily turn our attention to the consideration of these conditions. Few morbid changes in the body give such striking evidence of their existence as a valve lesion with its attendant murmur. Indeed, so impressive and so valuable is this sign as a means of diagnosis that, unless upon our guard, we may give it undue importance in prognosis. In other words, in making a prognosis, to regard the sign rather than the condition. Formerly, when all cases of cardiac murmurs were rejected by life insurance companies, this was not a matter of so much importance. Now, however, that a certain percentage of such cases are rightly admitted to life insurance, it is a matter of great importance to be able to identify and separate this group from those who are not admissible.

This identification is to be made not by regarding merely a given murmur, but by careful consideration of many other circumstances. Murmurs, indeed, have but a limited value even in diagnosis. They may be present when no valvular lesion exists; or, again, may be absent in severe valve lesions.

Even when denoting the existence of a valvular defect, they form little or no measure of its severity. From the standpoint of life insurance we may divide all cases of valvular disease into three classes:—

1. Those in which the only evidence of a lesion is the presence of a murmur.

2. Those in which, in addition to the murmur, other signs, such as hypertrophy, or modification of the normal sounds, are found.

3. Those which, in addition to the foregoing, present symptoms, such as dyspnoea, cyanosis, etc.

The last group may be dismissed at once, for already terminal symptoms are present, and, with few exceptions, life will terminate in three or four years.

Many of those in the first two groups, however, have a brighter outlook before them, and there may be found a few good risks, some fair and more impossible.

In order to decide in which class a given case should be placed, it will be necessary to direct careful attention to the following points:

- (1) The nature of the lesion, (2) the age of the applicant, (3) the cause and duration of the lesion, (4) general physical condition of the applicant, (5) his personal history, and (6) his family history.

Taken in the order of severity, the gravest valvular defect is aortic regurgitation, then comes in order mitral stenosis, aortic stenosis, and, lastly, mitral regurgitation.

Aortic Regurgitation may be practically excluded from consideration. From its general tendency to increase, and the danger of sudden death, it is a condition too formidable to be considered as a justifiable risk for insurance. Clifford Allbutt says that ten years is a long period for this lesion. Broadbent, however, speaks more hopefully, and says that, with the second sound heard in the carotid and with hypertrophy slight, such a lesion, resulting from a rheumatic attack, may exist for many years without giving rise even to discomfort.

Such cases, however, are the exception, and the lesion, if established early in life, will probably terminate the latter, shortly before middle age is reached.

Where the lesion develops later, as the result of degenerative changes, the prognosis is much worse ; at the most, two or three years will be the duration of life.

The same is true when it is the result of syphilis or excessive physical strain in early manhood.

Mitral Stenosis.—Here also we have a valve lesion, essentially so grave that very few, if any, of its victims would be accepted by life insurance companies on any terms.

The average duration of life for those suffering from this lesion is 33 years for men, 35 or 36 for women.

The gravity of the lesion is the result of the inherent tendency to increase in severity and its intimate relationship to the pulmonary circulation, whereby any attack of bronchitis or pneumonia injuriously affects the already embarrassed right heart. Exceptions, however, occur to this rule.

Quite recently I performed an autopsy on the body of an aged woman, dead of pneumonia. She was upwards of seventy years of age and had for some time suffered from paralysis agitans. On examining the heart, the mitral orifice was found to be markedly contracted, due to thickening and adhesion of the mitral flaps. Such examples, however, must be rare.

In connection with mitral stenosis, attention may be called to its occasional latency and consequent difficulty of diagnosis. When accompanied by its characteristic presystolic thrill and murmur at or near the apex, with its peculiar snapping first sound, it cannot be mistaken ; but in this lesion, more than any other, the murmur is notoriously variable.

In some cases it may be at times entirely absent, and if we relied upon the presence of a murmur to make the diagnosis, the condition would be overlooked. In such a case a hint would be given by the characteristic first sound. If, with such a first sound, the area of cardiac

dulness is found to be increased upwards and to the left, along the third rib, and the pulmonic second sound is found to be accentuated; and, if with these signs, there is any pulsation to the left edge of the sternum, it would be justifiable to suspect the existence of mitral stenosis. This suspicion will be strengthened if there is the slightest indication of cyanosis or breathlessness.

Aortic Stenosis.—If all cases presenting a systolic murmur, heard at the second right interspace and transmitted up over the sternum into the neck, are to be called aortic stenosis this lesion will be found to be not alone the most common but the most harmless of all cardiac diseases. But it is found that the large majority of cases in which this murmur is present have no narrowing of the aortic orifice. The causes which produce this murmur, apart from aortic constriction, are blood conditions, giving rise to the hæmic or functional murmur; roughening of the valve cusps either from endocarditis, or deposit of lime salts; more rarely, congenital fenestration of the valve may give rise to a murmur; and, lastly, dilatation of the aorta itself may cause a murmur similar to that of aortic constriction.

Excluding those in which the murmur is due to some blood condition and which are, therefore, of no importance in prognosis, and also those in which the lesion is dilatation of the aorta and where the prognosis is, therefore, very grave, there are still many cases which would be eligible for insurance, either as fair or doubtful risks.

It is in this class of cases that we must carefully consider the different points previously mentioned. Of great importance is the cause of a given defect in the valve. Rheumatic endocarditis is the most favorable. Syphilis and degenerative changes are very unfavorable causes, and should lead to the rejection of the applicant, not on account of the valve lesion alone, but on account of the attendant conditions. The age of the applicant is also of importance. If at or before the middle of the third decade, provided syphilis is excluded, the lesion is probably due to rheumatism, and is, therefore, favorable. In the fourth decade, or later, degenerative changes may be suspected.

Generally speaking, too, the longer the duration of the condition, as conjectured from the attack of rheumatism, the greater is the probability of its being stationary, and, therefore, favorable.

The condition of the heart, apart from the murmur, should be most carefully ascertained. The presence or degree of hypertrophy will form a measure of the severity of the obstruction. The less hypertrophy the less severe the lesion. If with little or no hypertrophy there is a loud and long murmur, no increased tension of the pulse, and no change in the first sound at the apex, we may conclude that the lesion is unimportant.

Where, however, hypertrophy is pronounced, and the apex beat is markedly displaced downwards, the lesion is more severe and the outlook not so favorable. Further, attention must be given to the applicant's personal history; his occupation, habits and social condition must be taken into consideration. Finally, his family history will be of importance. Absence of gout or renal disease will be favorable, while the history of these and a family tendency to early death will be unfavorable. While the average age of death from this disease is placed at forty, a fair number may go for several years longer. Once, however, symptoms of cardiac embarrassment have arisen in this disease, even in the earlier adult life, the prognosis is decidedly unfavorable.

Mitral Regurgitation.—This lesion is not alone the most common but is the least grave of all the valve lesions. In giving a prognosis the same considerations must be borne in mind as were spoken of in the previous lesion. The large majority of cases result from rheumatic endocarditis. Following this, degenerative changes, such as calcareous deposit and dilatation of the left ventricle from myocardial conditions, are causes to be borne in mind. Where the lesion is the result of endocarditis, and where the leakage is moderate in amount, as shown by the position of the apex at, or just without the nipple line, and when from its duration it is probably stationary, the prognosis is good and life will be prolonged into old age.

Even when, in addition to all the physical signs of the lesion being present, there are also symptoms of cardiac failure, such as cyanosis and dyspnoea, recovery may take place, and the patient live for many years in comfort.

When the lesion is due to dilatation of the ventricle, causing a relative incompetence, the prognosis will depend upon the cause and the age of the patient. If due to some acute condition, such as typhoid fever or diphtheria, or if occurring in the course of anæmia or alcoholism—if it be in early adult, or even later life, complete recovery is often possible.

If, however, the dilatation is the result of coronary arterial disease, a lesion of middle life, the prognosis is very unfavorable.

Many cases of mitral systolic murmur, occurring at or after middle life, may exist for upwards of twenty years without change or discomfort. In such cases the murmur is due to roughening and thickening of the valves, the actual leakage being little or none. Here the prognosis depends, not so much on the valve condition as upon the attendant conditions, viz., general arterio-sclerosis.

In all cardiac valve lesions, no matter of what variety or degree of severity, particular attention must be given to the character of the pulse as regards its tension and frequency. A high pulse tension is, in many individuals and families, a constant condition, even in the absence of any pathological change. Should a valve lesion develop in such an individual, the prognosis would be much less favorable than in an individual with a pulse of low tension, for with high pulse tension the heart will be less able to overcome the valve defect, or, having done so, will break down much earlier. To a less degree the same may be said of one whose pulse rate is habitually much above the average.

By a careful consideration of all the facts in each case, as above indicated, there is no doubt that a considerable number of those possessed of some of the valve lesions could with safety be insured.

In this connection it is to be borne in mind that little must be known of the length of the latent period in many of the subjects of valvular affections. By the latent period one means the length of time elapsing between the establishment of the lesion and the onset of cardiac breakdown.

Observations of the first event are common enough, occurring, as it does, in an attack of rheumatic fever, or other acute disease, but it is only when the second event occurs that the case is again brought to notice, and the duration of the condition can be thereby determined.

Just what percentage of cases, in which a valve lesion once established never gives rise to any symptoms throughout a long life, is unknown. An appeal to the post-mortem records of hospitals will not give an accurate answer, for an undue proportion of such subjects are the victims of poverty, and of vicious habits, conditions which would not apply to the class of persons able to buy life insurance. Every physician, however, of experience has knowledge of cases where, notwithstanding the existence of some valve lesion, which has probably been present for a long period, no inconvenience has resulted, and life has been ended by causes quite apart from the cardiac defect.

In this connection the following brief outline of a case, under my observation, may be of interest

Six years ago a farmer, aged 33, consulted me for some dyspnoea, precordial distress and rheumatic pains. His family were rheumatic, and his father had died about the age of sixty of some cardiac condition. He himself had had two attacks of rheumatism, the first one fourteen years previously, the second two years previously to the time I saw him. In both attacks he had suffered "pain in the heart." At the time I saw him he was disturbed by various subjective complaints, as he was markedly neurotic.

The cardiac condition was of great interest. He had a loud, high-pitched, musical diastolic murmur, which he himself could hear quite distinctly. It was heard from the second rib on the right side down the sternum, and one almost to the nipple line. The pulse was soft and a capillary blush in the fingers and the forehead. The heart was not enlarged, and the pulse did not indicate hypertrophy. The rhythm and site of the murmur pointed to aortic regurgitation. I have seen him at intervals ever since. One year ago the murmur could hardly be detected, then only on exertion, or on taking a full breath. For the past six months it has been entirely absent. In every respect the heart and blood vessels are absolutely normal. There is no increase of the pulse tension, or of cardiac dulness, or strength of pulse, such as might signify the possible transition, of a regurgitant lesion to a stenotic one.

As he is at present, one unacquainted with his past history would, without hesitation, admit him to life insurance on the usual terms. This case is all the more interesting in that the lesion was the most serious of all the valve lesions, viz., aortic regurgitation.

To conclude, I might cite a number of cases which I have been watching for years, subjects to mitral disease, and in whom there have been, as yet, no evidence of cardiac embarrassment.

LIFE INSURANCE, ITS MEDICAL AND FINANCIAL IMPORTANCE.

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LIFE insurance, as now conducted, is one of the most important institutions of our time. The history of life insurance is not new, for we find that as far back as in the days of Pliny, long before the Christian era, fraternal orders cared for the sick and infirm.

To insure men against the contingency of death demands that laws governing mortality shall be thoroughly understood, and that influences leading to unusual or extreme fluctuations in such mortality shall either be absent or reduced to a minimum. Nothing is more uncertain than human life when taken individually, but by grouping a large number of lives the approximate period of longevity for each age can be determined with great accuracy. Even our favorable modern conditions of human life are constantly being improved by prudent sanitary laws and other conditions. The new Mortality Experience Table, which has been handed down to us by the Institute of Actuaries of Great Britain, and

* Written for the Ontario Medical Meeting, held in Toronto, Ont.

involving a labor of almost ten years, reflects the most modern view of longevity among assured lives. It is interesting and gratifying to observe that, on the average, the expectation of life is about two years greater than in the former experience tabulated by this body in 1869. Our forefathers did not enjoy the same sanitary laws that now exist. Many of them lived in houses entirely devoid of ventilation, such as chimneys, fire-places, sleeping in drafty and ill-ventilated rooms, improperly heated and imperfectly lighted. It is only at the beginning of the last century, by paying attention to nature's well-established laws that any material change took place in the preservation of health and prolongation of life. Our dwelling places are now built with the idea of comfort and health, and not merely for external appearance. Very much, however, is yet required in the matter of drainage and ventilation, the removal of cess-pools, and in personal cleanliness. The defects referred to and many others were oftentimes due to the ignorance of the general population, but the more enlightened and educated we become the greater will be the improvement in longevity. I need not remind you, gentlemen, in the treatment of diseases, that the importance of sanitation and hygiene by medical men has been greatly improved within the last quarter of a century. Fresh air and sunlight were looked upon with horror by the nurse, and oftentimes by the medical attendant.

We are all familiar, I am glad to say, with the improvement that has taken place in that period in the drink habit. In polite society it is no longer considered important, or the "right thing" to have wine or spirits on the table at dinner.

For a number of years applicants for insurance were admitted without any medical examination. The judges were laymen who knew little or nothing of the ailments of human life, and the indications of present or near future disease. All this has been changed, and no one is now accepted without an examination by a duly qualified physician. The form of medical examination contains a number of questions, the objects of which are to assist the examiner in determining the insurability of the applicant and his probable expectation of life. There appears to be a mistaken idea with some of the examiners, in that they consider their duty performed when answers are given to the questions propounded. This is not the case. It is the examiners' duty to probe beyond the mere formal questions if they do not happen to elicit the information required.

I think I can say, without fear of contradiction, that life assurance companies, as a whole, contribute more to the incomes of the medical

practitioners of this continent than any other employer. During 1903, I estimate that the profession in Canada received from our life assurance companies for medical examinations of applicants about \$300,000. In this I have not considered the large amount which is paid by fraternal and benevolent societies for the examinations of their candidates. In the United States, the figures will be much larger—not less, I believe, than \$5,000,000. These are large sums and indicate at least two things: (1) The increasing importance of life assurance in the community, and (2) the increasing influence of the medical examiner.

As a rule, medical men are men of high character. It is not advisable to have too many medical examiners in any one place. This is most satisfactory to the head office, and eventually prevents the agent from employing outside examiners; and, besides, what is everybody's business is nobody's business, and I know from experience that when this rule is followed the medical men take greater interest than they could from the examination of a casual applicant. They become identified with the company for which they are working, and another fact I wish to impress upon the younger members of the profession who may be present, that so long as they do their work faithfully and honestly they will be defended by the head office, and not be subjected to the whims and petty annoyances of those who are often incompetent to form an opinion.

The selection of a medical examiner for a life insurance company is not made without very careful consideration. There are certain qualifications that are absolutely necessary for an examiner to possess in order that he may fulfil his duties with credit and honor to himself and the company he represents. It is not essential that he be a "specialist" in any particular branch of the profession; he should, however, have professional ability and high moral character, as well as some experience. He must not only be well-posted in his profession, but he must be a keen observer of character, possessing wisdom and discretion, neither too light nor too grave, too familiar or too distant; he should be incorruptible and unflinching. His professional attainments alone are not the most important qualifications of a medical examiner. He should be quick to detect imposition, courteous, combined with firmness and decision.

The condition of mind of an applicant for insurance is quite different to that of an ordinary patient; the latter is always ready, willing and anxious to give all the information he may possess relative to his conditions; yea, exaggerating his symptoms, thus necessitating the physician weighing everything before forming an opinion. The applicant oftentimes withholds and denies important facts in regard to his family and personal history, and the statements of such a party must

be carefully analyzed and considered by the examiner, as well as all other information that can possibly be acquired, before a proper opinion can be offered as to the eligibility of the applicant for insurance. Let it never be overlooked that the medical examiner is the representative of the company employing him, and not the representative of the agent or the man seeking insurance. He is paid his fee by the company no matter whether the applicant is accepted or rejected. In giving his opinion, therefore, the first consideration must be the company. The question arises as to the value of the risk—is he a good risk, or is he a bad one? Now health, strictly speaking, is a relative term, and, therefore, we must not approximate it from tabulated experience. We must form our opinion after having made our examination of the family history and the condition of the applicant himself, including occupation, environment, etc., and as to the probability of the man living to his expected time. On the other hand, there are certain diseases or conditions which either entirely preclude insurance, or which will only allow an assurance on some modified plan. These conditions may relate to the applicant himself, to his ancestors, or surroundings, including occupation and habits. Hence, we have classified risks into those that are insurable at ordinary rates, those that are conditionally insurable, and those that are not insurable on any terms. For instance, a person suffering from consumption or other serious disease, or following an occupation dangerous to life, or whose habits of life are vicious, or whose family history is very weak, as a rule, is not insurable.

I would like to say a few words about the relation existing between medical examiner and agent. The medical examiner should always bear in mind that the agent who procures the application is entitled to consideration. He has to work hard, in most instances, to get applications, having frequently to overcome prejudices, competition and other obstacles. The medical examiner should on all occasions where it is possible accommodate the applicant and agent as to time and place of examination. If this be not done, serious loss frequently result, not only to the company, but also to the agent, who has devoted much time and expense in procuring the application. In these days of competition it is essential that the examiner be not indifferent to the actual conditions existing. When possible the agent should bring the applicant to the doctor's office; if he cannot induce the applicant to do this, the examiner should not allow the case to be lost because of his neglect to visit him in his own quarters. I speak from a long experience in life insurance, that by mutual concessions and courtesies, there should be little or no difficulty in procuring a fit time and place for the medical examination.

The money consideration is not small, and it has some important features connected with it. The fees received from the regular life companies are fairly remunerative and are always paid promptly. Some medical men object to a classified fee, but they must bear in mind that it is impossible to pay the same fee for \$1,000 insurance as for \$5,000 or \$10,000. In these days of close competition every dollar spent is calculated, and at the end of the year makes quite a difference. It is notorious that a great number of medical men make examinations for assessment societies and fraternal orders, and other contract practices, at a far less fee than the examination fee of the ordinary life insurance company.

Although the agent's commission seems very high, and is, still the habit is so common of making rebates in order to obtain business that the agents, as a rule, are not as well off at the end of the year as when they only received one-half the amount of commission that they receive at the present time, which is generally due to the fact of rebates which are so common, and, I think, that the companies have just cause in endeavoring to get our Legislature to forbid such practice, and make the taking of a rebate a punishable offence. This would be far better for the applicants, as well as to the interests of all concerned, if it were faithfully carried out.

The importance of life insurance has been recently prominently brought forward before the teaching bodies in our medical faculties, and most colleges make it a part of their curriculum that a short course on life insurance should be included, and I am glad to say that at a recent meeting of the College of Physicians and Surgeons of Ontario this suggestion was considered, and, I think, approvingly.

The growth of life insurance in Canada during the past twenty-five years may be said to be phenomenal. Let us consider for a moment the tremendous strides made. In 1878 the new insurance effected by all companies—Canadian, British, and American—amounted to but \$12,000,000. Last year, or in 1903, the figures reached \$92,000,000, or an increase of \$70,000,000, in the comparatively short period of twenty-five years; but not only has the yearly volume of new business made great gains, but the total aggregate insurance in force has increased with leaps and bounds. At the same time, 1878, we find that the aggregate insurance carried by Canadians in our regular companies reached \$85,000,000; now, at the close of 1903, these figures have been increased until they reach no less than \$548,000,000. The amount invested by Canadians in life insurance is also interesting, and to many will, no doubt, be astonishing. Twenty-five years ago the amount of insurance premiums aggre-

gated \$2,600,000 ; in 1903, they totalled \$18,200,000, or just about seven times what they did twenty-five years ago. I mention these facts to you, not only to indicate the growth in the past, but to allow you to imagine the tremendous proportions to which life insurance is likely to reach in the next quarter of a century.

In conclusion, gentlemen, I thank you for the attention which you have been pleased to give me, but when I look over the list of names of those who are to speak on the subject, I am sure many valuable suggestions will be made, and I do not think it advisable to dwell on the subject further.

EXPECTANCY OF THE LIFE IN MORBID CONDITIONS OF THE GENITO-URINARY SYSTEM.*

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I HARDLY think the idea outlined on the subject of these short papers on life assurance by different men, and designated "Expectancy of Life" in morbid conditions of the various symptoms, is to be taken literally. Expectations of life is practically an actuarial question. It indicates the average number of years which is lived by all persons of a common age from that age up to the extremity of life, and it has no relation whatever to the most probable lifetime of any given individual. Medical examiners should, therefore, guard themselves from forming the opinion that a proposer who is likely to reach his expectation is entitled to rank as a first-class life. I think the title is rather to be used as a guide in dealing, as one sees best in the time allowed, with the subject from an insurance standpoint.

Genito-urinary diseases, as causes of death, given by the Mutual Life Insurance Company, of New York, in the celebrated report on their mortality statistics, show 3,951 deaths in a period of fifty-six years, in which all the deaths from all the causes were 46,525. Two diseases were responsible for the vast majority of deaths, and these statistics are borne out by those of the company, of which I am medical director. Two diseases, or titles, of this class seem to have paramount importance—Bright's disease and disease of the prostate gland, with the resulting inflammation of the bladder and pelvis of the kidney. Renal and vesical calculus were responsible for ninety-five deaths ; stricture and undefined diseases of the kidney for a few cases. I propose to eliminate both these chief factors of mortality from my paper, because disease of the prostate, in its interesting surgical aspect, is to be discussed by capable men at

*Read at the Ontario Medical Association, June, 1904.

this meeting. That they will speak most hopefully of successful surgical interference I feel sure; that any such success tends to lower mortality from this cause, or at any rate to defer the time of dissolution of aged policyholders to the benefit of the insurance companies.

Bright's disease, or albuminuria, is a very charming and difficult subject to the medical director. The applicants in this connection are those of large interests, successful men, able to take large insurance policies; think they are in the best of health, and very often agents seeing them cannot understand why they are not acceptable to the company. This subject was, I understand, touched on lately, and, therefore, I thought I could, for a brief period, speak of a general disease complicating life insurance, namely syphilis. I think a good deal is to be done in investigating and collecting information as to the effect that syphilis has on life insurance (I find very little in medical literature on this aspect of it), before we will be in any position to assign it to a true place. The object of this paper will be attained if I draw the attention of examiners to the necessity of close examination in all cases where syphilis has been thought to have been present. Usually the practitioner looks at syphilis in another aspect. The phenomena are actually present; his energies are directed to advising the best means of treating the initial lesion, especially if it should assume an unfavorable type, or in a long war against the general infection or secondary symptoms to prevent their far-reaching effects in the years after. But now he is asked to assure himself that syphilis has been present in the applicant; that he is free from all traces of it. It is not difficult to mistake or confound a chancre or chancroid, and even unimportant sores, like herpes have been designated, syphilis by the unskilled physician or quack, who is not infrequently consulted in such infections, thus most unfairly putting a lasting stigma on the applicant. This shows the necessity of a close examination, and inquiry to determine the number and position of the sores, looking for cicatrices of the same; searching the inguinal glands and the lymphatic glands for evidence of enlargement or operative measures; if enlarged, whether suppuration followed or not. The extent to which secondary manifestations have developed; was treatment used; for how long; did any recurrence of symptoms follow the cessation of treatment. By such care a pretty clear confirmation of the applicant's statement may be obtained. Now and then it is possible—often it is not—to have a statement given by the medical attendant who treated the applicant as to his symptoms.

This first step of making sure that the applicant has really been the victim of a true syphilitic infection being completed and decided in

the affirmative, we are confronted with the question, "What influence and what bearing has syphilis on the acceptance in life assurance." This is not an easy question to answer; there are so few data as yet gathered, so far as I am aware, that help; the literature of the subject of syphilis deals with nearly every other phase of the subject pretty fully, but only meagerly with this special aspect. Not long ago many life assurance companies were disinclined to accept any applicant that had syphilis; gradually this was felt to be too stringent and severe a rule, but no satisfactory basis has, so far as I know, been arrived at; each company deciding, according to the experience and personal opinion of the medical directors.

In deciding this question, the curability of syphilis, and the permanence of that cure, is a matter of extreme importance. This question is still a matter of difference and doubt. Let me quote a few extracts from those whose opinions are well worth considering:—

Berkeley Hill, writing in 1881, roughly divided his cases into curable and incurable. The curable got well in two years, the infection exhausting itself in that time; the incurable lasted an indefinite number of years.

Ricord, the great French authority, is very sanguine when he says, "Syphilis recognized is half cured."

Pye Smith says, "In the immense majority of cases a person who has had syphilis is, after a few years, free from it in every sense in which it can be said that one who has had scarlet fever or smallpox is free from that disease."

Gowers, on the other hand, is far from being convinced of its curability when he says, "There is no evidence that the disease is or ever has been cured."

No doubt the destructive tertiary lesions are much rarer now than in former times, but not infrequently their terrible effects are still seen on the nervous system, the viscera, the arterial system, and so we get paralyses, monoplegia, paraplegia, hemiplegia of different kinds, due to deposits of syphilitic material and proliferation of the same. Gummata in the brain itself, or its membranes, or deposited in the walls of the vessels, interfering with the cerebral circulation, often causing miliary aneurisms, leading to apoplexy and hemiplegia.

In the spinal cord, gummatous infiltration, localized deposits, occur with resultant paralysis. Locomotor ataxia in many, if not in nearly all, is probably of syphilitic origin. Similar results follow deposits and degeneration in the arterial system leading to aneurism in the viscera, especially the liver, kidneys and lungs, also the larynx.

The appearance of tertiary lesions prematurely in the early months after infection is a very unfavorable prognostic sign. It is often supposed that the tertiary symptoms are apt to be late in occurring, and, after the first outburst of the disease has subsided, there will generally be a long period of latency. This may be so, but in the majority of cases the tertiary lesions appear within a few years.

Dr. Ogilvie has shown that the greatest liability to tertiary symptoms is during the first three years. The only statistics I can find on this point are those given by Fournier. He says, "The following are the statistics, based on 2,395 cases, in which the date of invasions of tertiarism, under all forms of manifestations, could be determined exactly :—

During the 1st year	106 cases.
" 2nd year.....	227 "
" 3rd year	256 "
" 4th year.....	229 "
" 5th year.....	205 "
" 6th year	201 "
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Total in six years.....	1,224
From 6th to 10th year	499
" 10th to 20th "	543
Above the 20th	129
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Total	2,395

For being able to find these statistics I am indebted to Dr. Marsh, of the Mutual Life Assurance Company, New York.

This shows that if tertiary symptoms follow they will do so in more than one-half of the cases in six years, and nearly in 75 per cent. in ten years.

Further, it is necessary to remember the incident of syphilis in other diseases and constitutional states. While it is strongly held by some that the prospect of a patient with acquired syphilis is more likely to suffer from cancer or tuberculosis is exceedingly small, it is difficult to divest one's mind of the feeling that it is not a negligible factor.

Having thus briefly outlined the special care in determining the accuracy of the syphilitic history, the direction in which the danger is to be looked for, and the most probable time of its coming, the question remains: Can syphilitics be insured; if so, under what circumstances and conditions? If it be established that an applicant had syphilis, it is a distinct impediment to acceptance on ordinary rates. But if treatment has been efficient, and a period of not less than five years has elapsed since all symptoms have disappeared, he might be accepted, endowment assurance to be preferred. All such applicants should in all other respects be up to the full standard of health and physique.

Perhaps the most recent statistics in connection with the mortality of applicants for life insurance, who in their applications gave a history of

syphilis, is published by the Acturial Society of America in connection with its mortality investigation of special hazards.

This investigation contains the mortality experience of all leading Canadian and American companies upon certain classes of risks. Among these were those cases showing a history of syphilis. Here we have the largest and most recent available mortality statistics of persons giving a history of syphilis.

This experience shows that of persons whose ages at entry were 16 to 28, the actual deaths were 105 per cent. of the expected ; while those insured at ages 29 to 42, the actual number of deaths were 134½ per cent. ; in other words, 34½ per cent. more than was expected by the table. From ages 43 to 56 the actual to expected deaths was 153.3 per cent. of the expected, while from 57 to 70 it was 101.6 per cent. Taking all ages and duration of policies together, the experience showed that the mortality was 133.3 per cent. of the expected ; in other words, one-third more than was naturally expected, according to a table of average lives.

From these figures it will be seen that the extra mortality increases with age up to a maximum at 43 to 56 at entry and then decreases.

These figures clearly show that a company, composed of persons whose acceptance by that insurance company showed a history of syphilis, experiences a mortality higher than the regular premiums provided for.

These figures also show that too careful inquiry cannot be made by the local examiner when examining an applicant for insurance, and full information should be communicated to the medical directors of the company in cases where a history of syphilis is suspected or discovered.

EXPECTANCY OF LIFE IN MORBID CONDITIONS OF THE RESPIRATORY SYSTEM.*

By EDWIN RYAN, M.D., Kingston, Ont.

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IN valuing the expectancy of life in conditions of the respiratory tract, it is all important to have regard for every element bearing upon the hereditary, social and moral aspects of the life in question. There can be no denying the fact that heredity plays an important part in the conditions of the respiratory tract. The old dictum of Heine, " We cannot be too careful in the choice of our parents," should always be before our eyes in dealing with this complex question. It is contrary to the natural law that we can in any manner escape our hereditary predispositions.

* Read at the Ontario Medical Association, June, 1904.

In reference to hereditary diathesis, this also may be laid down to that acquired disease, and the effects caused by disease cannot in general be transmitted in such a way that the offspring presents lesions identical with those produced in the parent. There is the possibility of a certain amount of transmission, not of the identical lesion caused by the disease in the parent, but by a modification or impaired condition of the germ plasm. We must recognize that constitutional disease, by leading to disturbance in the activity of the important organs, plays not only directly upon these organs, but, secondarily, upon other organs ; that it leads, for example, to altered conditions of the blood, and so to altered nutrition of the cells of the body. Many other cells—the germ cells—may be directly affected, their idio-plasm modified, and the offspring directly influenced. Conditions affecting the parents are capable of influencing and modifying the descendants. It is this which is forcibly brought home to us in our medical work. It is changes of this order which are almost invariably unsuspected by the biologists, for they are not within their ken. The changes brought about in the tissues by what is assigned chronic intoxication may be so slight as to be unappreciable. Microscopical examination may reveal nothing ; only by their physiological effects can their existence be recognized.

It would be absurd to argue that the immature germ cells lie absolutely dormant in the organism ; they need nourishment ; they assimilate ; and, should they absorb circulating toxins, their idio-plasm must be affected by this act.

Parental intoxication, therefore, is seen to be capable of directly affecting the germ cells, and, if there be no direct transmission of the effects of such intoxication, certainly there are indirect effects.—*Adami*.

It seems clear, therefore, that conditions, affecting the "Respiratory Tract" in the parent, of whatever character they may be, influence to a greater or less extent the value of any risk. The fact that since Koch discovered the tubercle bacillus, and the contagious character of the disease has become known, the death rate has steadily diminished, does not alter the situation. The death rate from tuberculosis was decreasing before Koch's discovery ; it has been decreasing for the last half century, and is, no doubt, due to sanitary conditions, and to the improved social and moral life on all sides. We now observe a marked rebound on the part of insurance examiners from the position obtaining a short time ago. Every medical examiner now recognizes there is no factor in life insurance of more importance than a family history marked by tuberculosis. The experience of the United States Life Insurance Company for twenty-three years shows that 27 per cent. of their mortality was due

to consumption. Equally striking is the table prepared by the Mutual Life Insurance Company. Dealing with their entire mortality during the fifteen years, from 1879 to 1893, which amounted to 22,085 cases, up to twenty-nine years of age, the mortality was 35.8 per cent. of all cases in non-consumptive families, and 45.6 in families with a tainted record. In the next decade 26.3 and 39.6 ; in the next 17.6 and 24.6 ; in the next 6.7 and 15.7 ; in the next, that is, from sixty to sixty-nine years of age, the ratio was 5.8 and 8.2. A more recent tabulation of the mortality in this company, from 1843 to 1898, covering 46,345 cases, gives to tuberculosis 5,585 deaths, a percentage of 24.27 under forty-five, 10.88 between forty-five and sixty, and 4.03 above sixty years of age. Of late years, however, it has been proved that a bad family history may be largely neutralized by a good personal record, the chief indication being the weight of the applicant.

Dr. E. J. Marsh has made this very clear in the table referred to, and from it he is led to the following striking conclusion :—

1. That the history of consumption in any member of the immediate family increases the probability of its appearance in an applicant.

2. That consumption in a brother or sister is at least of equal importance as when it has occurred in a parent.

3. That persons who are under the standard or average of weight are much more liable to consumption than those above this standard, while the peculiarity of constitution which is indicated by the inability to take and assimilate a proper amount of nutriment, indicated a susceptibility to phthisis, or at least is a reasonable suspicion of such predisposition.

4 That persons who exhibit a robust and well developed body have little susceptibility to consumption. That the personal conditions of weight and robustness has afforded more value than family history. The evidences presented by a well-developed body may outweigh the suspicion attached to an unfavorable family record.—*McPhail*.

It does not change the aspect of the question to say that the death of applicant's relatives was brought about by "consumption of alcohol." In fact, that makes the situation all the more serious, for here there is a double inherited tendency.

In connection with all conditions affecting "The Respiratory Tract," the applicant's occupation, his social and moral surroundings, and his own habits of life have a most valuable bearing. There can be no question of doubt but that a well-regulated mind and body form a strong protection against an hereditary enemy. The same can be said, too, with regard to a purely acquired disease. If an applicant has suffered from,

say, bronchitis, or pneumonia, or pleurisy, the conditions that govern his life, subsequent to these diseases, must certainly be taken into account. Those who live an out-door life, whose occupation affords them plenty of pure clear air and healthful exercise, certainly cannot be placed side by side with those who are working in the contaminated air of mills and factories. As already pointed out, too, the present bodily condition of the applicant, whether he be well-nourished, etc., must have an important bearing.

All conditions, such as enlarged glands, cough of any character, hoarseness, the strumous appearance—disease, indeed, of any kind, or occurring at any time of life—must greatly influence us in arriving at an intelligent decision. The presence of catarrh in any form, nasal or naso-pharyngeal, merits the closest inspection.

Coming now to the specific diseases, let us consider each in question. Hoarseness, of course, may not have any direct bearing, but its specific cause must always be determined, and its presence should always be regarded with an unqualified suspicion. No applicant, who is subject to hoarseness of any duration, should be admitted.

Asthma, while it may be due to other than respiratory causes, in time has an influence on the respiratory tract. Asthma most decidedly has a strong bearing on the expectancy of life. If there be any hereditary tendency to tuberculosis, or other lung affections, asthmatics should not be accepted, nor should persons over forty-five years of age be regarded as insurable if they have any tendency to asthma. In young subjects, if the attacks are at long intervals, the disease, of course, is not so serious.

Emphysema forms a bar to insurance. The expectancy of life in subjects so affected is, to say the least, very problematical.

Pleurisy, if a long interval has elapsed, and if careful examination reveals no present lesion, may not debar an applicant. But there can be no doubt that pleurisy, if not due to tubercle, greatly influences the oncoming of that disease. Those who have had pleurisy must be examined with the greatest caution. Even then recent cases should be excluded.

Bronchitis, if long continued, or if repeated, lowers the tone of the "Respiratory Tract." An applicant who is subject to repeated attacks of bronchitis, will not likely fulfil the expectancy of life.

The occurrence of hæmoptysis also needs to be carefully considered. Indeed, unless there is some indication of trauma due to a heavy strain, such as lifting, etc., it is nearly always associated with incipient phthisis; and, no matter from what cause it is due, it seems to me reasonable that it leaves permanent injury to the lung.

Pneumonia may not influence the expectancy of life if it runs the regular course. Repeated attacks of pneumonia reduce the vitality of the lung. Broncho-pneumonia, or pneumonia of any form, where resolution is unduly prolonged, influences the expectancy. Great care must be exercised in these cases.

THE NERVOUS SYSTEM IN RELATION TO LIFE ASSURANCE.*

By H. C. SCADDING, M.D.
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BY the kind permission of the management of the Canada Life, I am permitted to present to you some tables, based upon the claims from diseases of the nervous system during the last four years.

The taking out of the mortality statistics in the past, has been, though very instructive, a very laborious business. The introduction of the card system to aid in this particular has been a great boon.

With the aid of our able actuary, Mr. Sanderson, a claim card was designed, upon which has been recorded the particulars of the risk as it became a claim, and which, we trust, in the future, will provide interesting material from the medical standpoint in life assurance.

Unfortunately, there did not appear in the earlier medical forms certain questions which we now deem important, and so, for many years, we cannot expect to reap the crop of information which we at present think would be of interest. Perhaps, at the end of twenty years, with the advance of medical science, we will then regard as useless what we now think to be essential.

Great care is now being taken to obtain by special form, and supplementary inquiry from the head office, the actual cause of death, and as greater accuracy of report is being attained to, owing to increasing knowledge of pathological processes, the returns are becoming correspondingly less indefinite. "Dropsy," as a cause of death is now rarely if ever, returned; and "paralysis," though still frequent, is much less so year by year.

It is possible, of course, that many deaths returned as "apoplexy" are in reality "cerebral softening," or *vice versa*, but considerable care has been taken to classify the causes from the histories of the fatal illness, and I think the result fairly accurate.

There are 221 cases in all, and they represent 17 per cent. of deaths from all causes. Of these, as it is expected, the apoplexies contribute 10

*Read before the Ontario Medical Association, June 16th, 1904.

per cent.; cerebral softenings, 3 per cent.; general paralyses, 1 per cent.; meningitis, 1 per cent.; and of the other brain and cord affections, each less than 1 per cent.

I hope not to weary you with statistics, and, inasmuch, as the figures are "small," I trust that you will permit me to make short reference to them.

Perhaps the most noteworthy facts brought out by this small series of cases are that the largest proportion—32 per cent.—of apoplexies occurred in the age group 55 to 64. The average age at entry being 41, and the average duration of each life 21.87 years. Sixty-nine and 31 per cent. of the general paralysis occurred in the groups 35 to 44 and 55 to 64 respectively; the average age at entry being 32, and the average duration of each life being but 14.83 years.

Most of the diseases of the nervous system, for which the medical examiners for life assurance are concerned, are so closely linked with disorders of the vascular system that it is impossible to dissociate them.

The cerebral apoplexies, for instance, which form by far the greater number of deaths ordinarily classed under the nervous system, are, of course, primarily due to disease of the brain vessels; and the general paralyses, which also contribute largely and expensively to the mortality, are, without doubt, dependent upon an imperfect or vicious blood supply.

The acute affections of the nervous system, such as meningitis, occur in the main early in the policy life, and may be compared to the pneumonias, etc., the mortality from which cannot be influenced by medical selection. The same may be said of the cerebral softenings, the claims occurring in the late policy years.

Influence of Medical Selection.—It is common to regard five years* as a period wherein the influence of medical selection is felt. In the mortality statistics of the Mutual Life of New York, extending over a period of fifty-five years, and embracing 46,525 deaths from all causes, Dr. Marsh points out that, while deaths from Bright's and heart disease are diminished during at least part of that time, apoplexy and allied affections "give very little indication of being subject to control by medical selection, the company's mortality being almost as high in the first year after insurance, as at any subsequent period."

While consumption was, generally speaking, held to be the greatest foe to life insurance during the period to which these figures have reference, and while evidence of Bright's and heart disease were sought for with more or less care, how little attention was paid to diseases of the vascular system by the examiners, and how little weight

* This has been recently extended.

attached by the medical advisers to a family history of arterio-sclerosis, gout, rheumatism, asthma, or neuropathic manifestations!

It is a matter of common belief, although it is impossible to demonstrate the fact, that the prevention of apoplexies has been effected by timely advice to patients in whom the medical attendant has found diseased vessels, and it would seem reasonable that as examiners become more alive to the necessity of, and better versed in, the examination of the vascular and nervous systems, and as medical advisers give more weight to the effect of heredity in such affections, so surely will the influence of medical selection be felt, not only in the first five years of policy lives, but perhaps, to some extent throughout.

Unfortunately in the cases referred to in the tables under the heading of "General Paralysis," there was no history given of syphilis—no particular question as to this very serious disorder entering into the earlier medical forms. That syphilis is the predisposing cause of paresis and tabes is now a matter of very general consent. What wonder, then, if we advise our companies to decline to accept risks on standard plans, wherein there is a past history of syphilis, a neurotic taint in the family, and an occupation liable to prove the exciting cause of a general paralysis in the early policy years, and, escaping that, a tabes but little later in the policy life.

Perhaps, a recapitulation of the important points in the examination will be of practical utility.

Family History.—Heredity undoubtedly plays a most important role in determining the life expectancy of those whose antecedents suffer, or have suffered, from disease of the nervous system. How commonly epilepsy in the father is followed by insanity in the offspring; hysteria in the mother, by epilepsy or other neuroses in the child; and insanity, or that which predisposes to it, alcohol, in both parents, followed by idiocy in the offspring!

Perhaps the remote family history has a greater bearing on the outlook, as regards the nervous system, than it has upon any of the other important systems. Mental disorders, like gout, have a tendency to skip a generation, making their appearance in the first and third generation, and leaving the second apparently untainted. When there is a suspicion of neuropathic liability, it is undoubtedly important to obtain the collateral family history, and to question closely as to whether there are, or have been, any cases of mental alienation or other serious neuroses.

Diabetes and Bright's disease, gout and rheumatism, occur so frequently in neurotic families, that due weight must be given to these when they appear in the family history of the applicants showing even

slight tendencies to disorders of the nervous systems. It will, therefore, be apparent how important a matter it is to obtain as definite information as possible regarding the family history.

Habits.—If heredity is the primary predisposing factor to be considered in determining the resistance of individuals to disorders of the nervous system, alcohol is a good second, with syphilis pressing it hard for the place.

The importance, therefore, of accurately reporting the habits cannot be over-estimated. The difficulty of so doing is often very great, and greatest usually in those cases where accuracy is most important, owing to the unreliability of those applicants who are given to over-indulgence. Great as the difficulty is, however, it is a bagatelle compared with that with which the medical director of the insurance company is confronted when he endeavors to estimate the risk on such expression as "no habit," "drinks when he feels like," "occasionally," and a host of other indefinite terms.

The Reflexes.—While the reflexes which interest neurologists are far too numerous to mention in an ordinary discussion on life insurance aspects, yet there are certain well-known ones that are of the utmost importance, and should be tested in all cases coming before the medical examiner.

The absence or alteration of the pupillary reflexes is easily discerned, and gives most valuable information as to the integrity of the centres or of the sensory or motor branches of the arc.

If the knee jerk appears on the common test to be absent, a more careful examination should be made before pronouncing it to be abolished. While the applicant is seated upon a table, so that the feet do not touch the ground, his eyes closed, limbs bare, and hands firmly grasping the edge of the table; the examiner taps the tendon with a percussion hammer, or the ulnar surface of his hand, the other hand grasping lightly the leg above the knee. If not absent, is the patella reflex increased or diminished?

The absence of the heel tendon reflex is an early indication of tabes. The ankle-clonus is also indicative of disease.

The presence of the "Romberg symptom" indicates static ataxia, and should always be searched for, it being just as important to know that there is perfect balance of muscular action as it is to determine muscular power or paralysis.

Any peculiarity of gait or attitude should be observed and recorded, as it may indicate pathological conditions. If the handwriting is ataxic or tremulous, further examination as to the cause is desirable.

Use of the Ophthalmoscope.—The use of the ophthalmoscope may be thought to be an unnecessary refinement of examination; yet a number of early manifestations of serious affections it alone may reveal. In cases and places where it would seem to be most useful however, *e.g.*, prosperous proposers, past middle life, living in large centres, applying for large amounts on cheap plans for business or family protection, there are fortunately capable ophthalmologists, whose aid undoubtedly should be sought to determine the eligibility of the risk.

Arcus Senilis.—The presence of the “Old Man Arch,” or Arcus Senilis, should always be noted, though it is not *per se* of much prognostic value. It has been held in the past to be a sign of fatty degeneration of the heart, but is now regarded in general as a failure of nutrition incident to age. Heredity seems to play some part in the production of this phenomenon. Moore has known a family in which three male members have had the complete arc before 35 years of age, and in a family well-known to myself, the mother and two of three children have well-marked arcs, the children exhibiting it before 30 years of age, and having no evidence of degeneration of heart or vessels. It will, therefore, be seen that taken by itself in determining the apparent age, or the presence of arteriosclerosis, it may lead the examiner into error.

Headaches.—The history of headaches should always be closely inquired into. While some are due to slight disturbances of the digestive tract, which would have little bearing on the life risk, others may indicate the approach of very serious brain affections. The severe nocturnal general headache is most suggestive of syphilitic disease of the arteries of the brain, and the persistent frontal or occipital headache may be the earliest symptom of brain tumor. Migraine or sick headache is not by itself of grave import, but this is so frequently an evidence of inherited neuropathic taint, that it should indicate the desirability of close inquiry into the family history, direct and remote, as to whether there are or have been cases of mental alienation in the ascendants or their relatives.

The eye-strain headache has a most important bearing upon the life, for if not relieved by appropriate treatment, may lead to early claims by nervous exhaustion, insanity or suicide.

Tremor.—Applicants presenting a tremor at the time of examination be very closely questioned in order to determine its probable cause. should Excuse is not infrequently made that a slight tremor of the hand or tongue is due to “nervousness,” owing to the fact of the examination, and occasionally this may be true; but its presence should always be

noted on the medical form, or by confidential letter to the company. It may indicate secret addiction to alcohol, when the habits are alleged by the applicant, and believed by his nearest friends to be exemplary.

The character of an alcoholic tremor is too well-known to all to need description. Excessive use of tobacco sometimes occasions tremor; but it is usually accompanied by irritable heart and inflamed throat and other symptoms incident to the excess. Intention tremor, in a large majority of cases, indicates disseminated sclerosis. It is the result of muscular inco-ordination when any attempt at the more delicate movements of the hand is made. Indeed, it is not always confined to the movements in the hands, and it has been noted in the face and in the tongue, and even, according to Starr, in the vocal cords.

The tremor of paralysis agitans is unmistakable, beginning ordinarily in one or both hands, and being slow and rhythmical and ceasing during sleep, but being constant while at rest.

Occupation.—There are certain occupations which must be taken into account when examining the nervous system. Not only are some occupations of manual laborers inimical to life through the involvement of the nervous system, but also the callings of those in the higher spheres of life—individuals exposed in ill-ventilated work-shops, to the poisoning of lead, arsenic, etc.; the purveyors of alcoholic beverages and those who, by virtue of constant mental anxiety in business or profession, are particularly prone to nervous break-down. From this last named class the companies sustain the largest individual losses.

It is impossible to frame a medical form particularly covering the nervous system that will give a perfect pen picture of certain proposers, and the medical examiner must be relied upon to amplify the reports in these cases, in order that the medical advisers of the life assurance companies may arrive at a just conclusion regarding the life. A keen observer will always cover the ground with more satisfaction to the company and less trouble to himself than will the less thoughtful examiner. The first will anticipate the doubts and difficulties of the medical director, and will forward at the time of the examination information amplifying his report. The second will receive questions from the home office, which will involve extra trouble to himself, possible irritation of the applicant, probable disappointment to the agent, perhaps loss of business to the company.

THE FINANCIAL RESPONSIBILITY OF THE MEDICAL EXAMINER FOR LIFE INSURANCE.*

By BRUCE L. RIORDAN, M.D.C.M. Toronto, Ont.

Medical Examiner North American Life Assurance Co.; Surgeon to Toronto General Hospital.

MR. President and Gentlemen : The position of a medical examiner for a life insurance company is a confidential one, and it is the duty of the examiner to discharge all his obligations in this respect to the company, carefully, honestly, and to the best of his ability. While one examiner may be more competent to discharge these duties with more skill and competency than another, it is only where negligence can be shown that there is any liability on the examiner from a legal point of view. If the medical examiner discharges his duties to the best of his ability, and exercises due care and precaution, and discloses all information received from the applicant, and carefully records the answers, as they are given to him, to the various questions asked, using his best judgment as to the information which he himself furnishes to the company, his duty is performed, and there is no financial liability upon him in any way to the company, or to the applicant.

It has been decided in the courts that the medical examiner is the agent of the company for recording the answers of the applicant—*Grattan v. Mutual Life Company*, 80, N.Y., 281 ; 92, N.Y., 274. Therefore, it becomes very important that the medical examiner should be a man skilled in his profession, and of undoubted honesty and probity, as his report would be receivable as evidence against the company, unless in those cases where it could be shown by the company that he was guilty of fraud and deceit, in withholding material facts, either of his own accord, or at the request of the applicant for insurance.

The medical examiner is not the agent of the applicant for insurance.—*Hollman v. Life Insurance Company*, 1, Woods, 674. The facts concealed or misrepresented by the examiner must be material to the contract. If he misrepresents, or does not disclose the correct answers of the applicant, the company is responsible for any damage resulting from such irregularity of the examiner, and there is no doubt that in the event of such irregularity being proved, the examiner would be responsible for the financial loss or damage suffered by the company that may have resulted from such concealment or negligence.

There, however, have been contrary opinions held in cases where the form of application makes the examiner the agent of the applicant, *i.e.*, where the statements contained in the form are declared or warranted to be true, and in one case where such statement was false, and was

* Read at the Ontario Medical Association, June, 1904.

written therein by the medical examiner of the company, the policy was declared void. —*Sternaman v. Metropolitan Life*, 63 N.Y.S., 674, 1900.

The relationship between the company and medical examiner should be one of trust, and such position should be occupied by one who is recognized as being a man of undoubted honesty, skill and thoroughness in the discharge of his duties. In many cases the company may suffer considerable loss in case his obligations are not discharged properly. It has already been decided in the *Provident Savings Life Assurance Society v. Rutlinger*, 58, A.R.K., 528, and other cases, that where the medical examiner fills in false answers to questions, which are otherwise answered by the applicant, but without the applicant's knowledge, and then procures his acknowledgment to the application in writing to these questions by applicant's signature, the company nevertheless is bound and cannot have any recourse under the contract against the insured, but in such case would have an action against the examiner for any damages it may suffer in connection with the contract.

The examiner who writes in false answers in his report may be liable for criminal prosecution, and in many of the states there are provisions imposing a penalty for any such breach; notably in the State of Michigan, he is liable to a fine, not exceeding \$1,000, or imprisonment not exceeding three months, and shall be liable to the company in an action on the case for the full amount of any insurance obtained from such company by means of, or through, such false report—See Michigan Revised Statutes, Sec. 4, 235.

A medical examiner is recognized as the agent of the company only as to that part of the application which he is required to write—*Leonard v. State Mutual Life Assurance Company*; 31 *Law Insurance Journal*, page 584.

The financial responsibility of a life insurance examiner is, therefore, an important question with the company, and an important obligation is assumed by the medical man who examines applicants for insurance.

INFLUENCE OF HEREDITY UPON THE EXPECTANCY OF LIFE.*

By H. R. FRANK, M.D., C.M., Brantford.

THAT like produces like is a fundamental principle. When deviations in structure frequently appear, we sometimes cannot tell whether it may not be due to the same cause acting on both; but when individuals exposed to the same conditions display deviations which appear in the parent, child or grandchild, the mere doctrine of chances compels us to attribute its reappearance to inheritance.

* Read at the Ontario Medical Association, June 1904.

That every unfolding organism eventually takes the form of the class, order, etc., from which it sprang, is a fact which by force of repetition has acquired in our minds almost the aspect of a necessity.

It is owing to the recognition of this principle so definitely enunciated by those masters of observation and research, Darwin and Spencer, that life insurance to-day is the exact institution it is.

Working largely upon this principle, the profession has been able to formulate those laws of mortality without which life insurance would be a speculation—no more and no less. However, having declared the pronounced influence of heredity upon the longevity of a candidate, let us look at the conditions which determine his relationship to those laws of mortality.

We must have accurate information as to his family history, not only the immediate family, but progenitors through at least two generations. We must know his personal history. We must know his habits and environments.

In seeking a just conclusion we find these several conditions so interdependent that it is frequently difficult to arrive at an opinion. It is true he may have an hereditary taint, but we must consider his habits and environments—I mean his regularity in the pursuit of such hobbies as tend to improve his physical and mental conditions, and particularly, a financial standing, which insures his power of indulgence in them.

It appears to me that this phase of an applicant's standing is not sufficiently recognized, for if at the first appearance of an ailment a man seeks and is in a position to follow advice, he is surely not in the same class as the man who is compelled to adhere to any occupation he may be following.

While we recognize the truth of existing hereditary influences, we must not consider alone those working for ill, but must also keep in mind their possible modification through healthy hereditary channels. It is true that mental or physical characteristics may be traceable through generations, but we have to deal with the individual. A man stands, not as the counterpart of his father or mother but as the accumulated influences of generations. Particularly does it seem to me that environment plays a great part in modifying many hereditary taints. Under the influence of modern treatments, we know that we must even now begin to look more hopefully at that most potent of all hereditary influences—the predisposition to the acceptance of the infection of phthisis.

What I wish to be gathered from this, gentlemen, is that while we should be zealous in our endeavors to protect the company from bad

risks, we should not forget that we may be holding from them good business, not to mention the withholding of protection from the candidate. After this has been said and we are cautioned against overlooking those conditions which may modify an hereditary taint, we know that parents exert a most appreciable influence on their offspring. The history as far back as it can be traced should be gone into. Diseases skip generations, and become potent in the grandchildren.

Mental qualities are not, as a rule, very traceable, but the nearer we approach the physical organism, the more active become the influences of heredity, and while the family may have a history of longevity we will find on looking into it that it means a succession of physically and mentally well-balanced progenitors. In the short-lived family we usually find the combined influence of parental taint—the father's predisposition supplemented by that of the mother, and by so much intensified.

We find that that great observer, Darwin, points out the transmission of disorders and malformations, the tendency of a child physically in the likeness of a parent to exhibit the same diseases of that parent, etc.

The disposition of families to contract certain epidemic affections is also demonstrated as well as the appearance at a corresponding time of life of inherited diseases.

Another point to be noticed in considering the question of heredity is the intensification of some traits by transmission, and the complete elimination of others. Examples of these will be placed before you in considering some of the more common diseases in detail.

While we are dealing with the subject in a general way, it would be well not to overlook the fact that a mother may transmit a disease without herself becoming infected, and that certain diseases in the ancestry produce a tendency to certain other affections in succeeding generations.

When we come to consider in detail some few of the more common diseases which are either directly transmitted or where the predisposition is passed on, the most prominent is, of course, phthisis, not only because it is the most widespread of maladies—"a disease of all times and countries"—but also because in considering an applicant's fitness for acceptance, a great many influences have to be considered by the examiner.

When we attempt to consider, with any degree of accuracy, the influences which heredity bears on this subject, we are at once confronted by the many fallacies to which investigation is exposed. Bronchitis,

pneumonia and pleurisy are frequently described as cause of death in parent, grandparent, uncle, aunt or brother. The examiner must carefully look into all such causes of death, and he will frequently find that a parent, etc., who died from pneumonia had been confined to his bed for two weeks, but ailing from a cough for some months before.

We must ever have before us that latent objection on the part of the laity to admit even to themselves that there is existent in the family a tubercular taint. It is not within the province of this paper to discuss the different channels through which tuberculosis may be transmitted whether the bacillus is directly passed on or the tendency to its acceptance

From a wide comparison of statistics, however, there are some general deductions which are accepted, and are of great aid to the examiner.

That the extremes of life are comparatively free from danger, the most potent period being youth and early manhood; the disease is rarely encountered after forty-five; that when there is a family history of phthisis the disease will, in all probability, appear earlier in succeeding generations; that the inherited tendency is more potent in females than males; that an inherited tendency may be transmitted through healthy parents, they being "silent carriers"; that different forms of the disease run through families, in one case the acute tubercular, in others the fibroid type; that if the taint exists on one parental side only, the potency is nearly two-thirds less than if both parents had been afflicted

In reviewing the undoubted tendency, whether direct or indirect, that exists to the inheritance of this disease, I think we must more fully begin to realize the great influence that environment plays, both in a prophylactic and curative way. We have all of us seen cases of incipient phthisis, where under proper regime and treatment the disease has been stayed in its progress and finally eliminated.

It is in the consideration of such cases as these that the opinion of the local examiner is not sufficiently consulted. He alone knows the habits, disposition and financial standing of the applicant; and, while it is readily conceded that the company should be protected by a lien or a modified policy, there is no reason, in my opinion, why such applicant should be absolutely refused or placed in the same class as those who are of different habits, disposition or financial standing.

Approaching the subject of the hereditary influence of insanity immediately after discussing phthisis, I do so, feeling that while not so common as many other diseases, its influence is more frequently overlooked than it should be.

The tenacity with which this taint clings to succeeding generations, presenting itself, as it does, in various forms, is worthy of the gravest

considerations. It must be remembered that while the disease may not be transmitted in its primary form, we frequently see in the grandchildren outcroppings of epilepsy, hysteria, eccentricities, and predominating nervous temperaments, I have now under my care three epileptics, cousins, where the three fathers are sons of an insane mother; otherwise the families seem to be in perfect health.

Either parent can transmit the disease and the mother will pass on a paternal influence without herself being affected. It must ever be kept before our minds that the disease generally increases in potency in succeeding generations.

Having spoken of insanity, we naturally drift to a consideration of nervous diseases generally, and find that many of them are hereditary, such as general paralysis, mania, and, according to Charcot, locomotor ataxia, when it has developed in early life.

We are advised by Pollock that, in considering these cases, careful inquiry should be made as to the predisposition of brother and sister to a neurotic tendency; and, if such disorders exist, the applicant should not be accepted, unless he has attained middle life, is of good habits, and has developed no neurotic symptoms,

Epilepsy is undoubtedly a disease of marked hereditary tendency, and, while it may not appear as such, we are almost sure to have some neuroses. The mother's influence in transmission is more potent than the father's; and, in all cases after forty years of age, the applicant may be considered as free from the hereditary influence.

When we come to discuss the heritability of cancer, we are met with a good deal of controversy, but here again we turn to our friend the statistician, and find that it appears in the offspring in something under one-third of all the cases, is most prevalent in middle and advanced life, and has a tendency to appear in the same organ as that affected in the progenitor.

In this habit of appearing after a certain period, as age advances, a contrast is offered to the influence prevailing in phthisis, which we saw decrease after a certain age.

Any attempt on the part of the examiner to trace the hereditary influence of the different forms of carcinoma is practically useless, as it is in the vast majority of cases impossible to get any reliable history.

The accepted directions, in considering these cases, so near as I can find, is that the offspring of a father and mother with carcinoma should be rejected. Where only one parent suffered, and that not imparting the physical type to the child, the applicant may, after having passed his thirty-fifth year, be accepted.

While the prevalence of syphilis is known to medical men to be much wider than the laity suspect, and while, I believe, that it is rapidly increasing as the centres become more thickly populated, and while it is one of those diseases directly transmitted, from the standpoint of the insurance examiner it is of little importance so far as its hereditary influence is concerned, inasmuch as for obvious reasons no history is presented.

With a direct knowledge of the existence of the taint, however there are some points of value, namely, that the disease may appear in the offspring years after either parent has suffered from the original disease. The secondary poison may be transmitted from the father to the mother. The inherited taint protects. The disease does not appear in a third generation.

Rheumatism, heart trouble, asthma, hay fever, and diabetes, present a group which by the insurance examiner must always be considered as having a direct hereditary influence on the character of a risk.

The peculiar nervous phenomena working through and intimately connecting these diseases have not yet been made clear by pathologists, but to realize the existence of such a connection we have only for a moment to consider the figures presented by Goodheart, backed by the even larger finding of Salter, *e. g.*, of 123 cases of asthma observed by the former, 50 showed a well-marked neurotic inheritance; in 25 it was apparently the direct transmission of asthma or hay fever; in 8 more, one or other of the parents had had rheumatic fever; in other families there is a history of megrim; in others, somnambulism and diabetes existed.

In dealing with these diseases separately, I must again emphasize the point of their marked connection—for while the examiner is in hot hunt for heart trouble where rheumatism is in evidence in the history, he is very prone to overlook, where the grandfather suffered from rheumatism or gout, the probable predisposition to asthma, diabetes and nervous troubles in the offspring.

A rheumatic tendency is, no doubt, frequently inherited; the disease has occurred in the newly born, and the children of rheumatic progenitors are more prone to this trouble than are others, in the proportion of five to one.

The disease may be either directly transmitted, or more often a constitutional predisposition to its development seems to be inherited.

Statistics show that in 30 to 40 per cent. inheritance is a factor in rheumatism. Of course, were we to consider only those cases where there is a double inheritance we would find these figures largely

increased, and where the progenitors, through successive generations had been afflicted we would find them not only increased, but the type much more severe and persistent

Acute attacks are seldom seen after fifty, and in early life, especially about puberty, females are more prone to the disease than males; after that the natural exposure the male is subjected to makes him most susceptible.

Again, in this disease we see the great influence, environment, habits, occupation, and social standing have in modifying the potency of the hereditary taint.

We know that damp surroundings, loose living, exposure and insufficient food are able assistants to any inherited rheumatic tendency. The examining physician is practically the only one who can properly judge of these conditions, and his opinion should carry a proper weight.

Rheumatism and heart disease in the nomenclature of the insurance examiner are almost synonymous, but in considering the hereditary influence of the former in producing the latter we are very apt to overlook the tendency in the child of a rheumatic parent to the development of thickened valves, and that without the appearance of any rheumatic symptoms. This is even more common in gout; but as this disease is so seldom met with in Canada I am not devoting that space to it which its important hereditary influence demands, and will dismiss it by drawing the examiner's attention to the marked tendency there is in the offspring of gouty progenitors to heart troubles, and the balance of that group of diseases spoken of.

Asthma, according to Salter, was hereditary in 14 out of 35 cases observed by him. In many the inheritance was direct. The same authority finds the influence most potent in early life—up to 20 years of age; rare in adult life, and again appearing in old age.

Trousseau draws attention to the hereditary connection between eczema, rheumatism, gout and asthma. Pollock states them to be simply "different expressions of the same diathesis."

The influence that heredity plays in the appearance of diabetes is too well attested to be doubted. Saundby quotes one example, where it occurred in eight members of one family, extending over three generations. He also draws attention to the hereditary connection between this disease and rheumatism, gout and many nervous diseases

It is frequently seen in members of the same family, and examiners should be on the lookout for rheumatism and nervous debility in the near relatives of an applicant whose history shows a diabetic diathesis.

In considering the hereditary influence of alcoholism, we cannot do better than quote the words of Rolleston. He says: "Hereditary taint may be traced in a very large proportion of alcoholic cases; it is said in nearly a moiety. The children of drunkards are extremely susceptible to the influence of alcohol; a quantity that would not affect ordinary persons intoxicates them and produces results not so readily seen in more normal persons. It has been said that when the father has been a drunkard it is rather the moral nature of the offspring which is altered; when the taint is on the mother's side that the brain and nerves are particularly liable to suffer; the mother's influence is said to be the more powerful of the two. "Drunkenness not only breeds alcoholic tendencies, but produces a decidedly neurotic taint and a strong predisposition to insanity. . . . Thus the influence of heredity consists in an unstable condition of the nervous system which may be due either to drunkenness or disorder in the nervous system in the parents."

Here, again, gentlemen, it is scarcely necessary to call your attention to the marked influence for good a healthy environment would exert in modifying an hereditary taint.

Before leaving the subject of alcoholism it might be stated that where such a history is coupled with cerebral hemorrhage, heredity must be considered as a factor in connection with the latter. The same relationship, I would here say, exists between this disease (cerebral hemorrhage) and rheumatism.

A suicidal tendency is said to "run in certain families," but where it "runs in families" it is only another way of saying that there is an hereditary taint of insanity, appearing in succeeding generations. An isolated case of suicide in a family history, with no marked neurotic symptoms, should not bar a candidate.

Having thus briefly reviewed a few of the more common hereditary diseases, I would, before closing the paper, like again to draw the attention of the examiner to the relationship he bears to the company and the candidate, where those diseases are concerned that to-day present an hereditary influence, which, by treatment, can be modified.

When I speak of treatment in this sense, I do not refer only to the use of a few drugs, but a possible change of climate, habits, occupation, etc.

It seems to me, gentlemen, that we are on the threshold of a new era; we cannot much longer go on with the present classification; we must prepare ourselves to furnish the actuary with a fresh clause in our law of mortality; we can no longer consider the applicant, who, suffering from an hereditary taint, is subject to the influence of bad habits, sur-

roundings and occupation, as being in the same class with his brother, who has the inclination and means to take advantage of the advanced findings of modern treatment.

We have seen this to be true in many cases of hereditary influence, and have reason to think that during the next decade similar progress will be made in mitigating to an appreciable degree the potency of many hereditary taints. However, until the profession furnish this fresh clause in our "law of mortality," the local examiner must stand responsible for any recommendations he may make. That such recommendations should be made is a paramount duty when we consider our relationship to the candidate.

The company *may* be guided by a mass of statistics, but the examiner is judging the individual, and must not, through any indifference on his part, deny him a valuable asset, and in many cases a much needed protection.

Before closing, just a word as to the detail of examination, as it appears on, I think, a majority of the forms furnished—the family history is early dealt with, and shortly after the candidate is presented with the question, "Which parent do you most resemble?" If he be at all astute he at once begins to make himself think that he bears a strong resemblance to the healthy side of the family. I have had this experience personally in examining, where I knew the opposite to be the truth.

In this paper I have not given space to crediting authority, but wish to say that I have quoted from Saundby, Pollock, Rolleston and others.

DISCUSSION.

Dr. J. L. Davison, Toronto: While it may be true that adolescence is especially the age of tuberculosis, and old age that of cancer, yet it must be emphatically understood that no period of life is exempt from tuberculosis. Concerning the influence of heredity on cancer, at the present day not much attention is paid to it; the report of the recent German committee of investigation being that cancer is not hereditary. In regard to syphilis, I hold that three years of active treatment, as advised by Jonathan Hutchinson, is the only safe method. The patient should not be considered cured until he has remained free from symptoms for a period of ten years, and even then we cannot be certain of complete safety. Examining physicians should be more careful of their reports, and should not hesitate to write confidential letters to the Medical Director explaining obscure points. As to the examination of the blood vessels, any degree of sclerosis, or visible pulsation in the radials, is of great importance; often of more importance than the existence of a heart murmur.

Dr. Machell, Toronto, suggested that, owing to the excellence of the papers and their importance to practitioners in general, they should be published in book form and distributed to members of the Association.

Dr. John Ferguson, Toronto, held in regard to syphilis that Sir Wm. Grovers was right—"It damages the vitality of the system and paves the way for the entrance of other diseases, such as tabes, aneurism and paresis." The applicants with short-lived parents and relatives are not, as a rule, good risks. Alcoholism is generally an evidence of neurosis in the family. Very many neurotics also have an alcoholic ancestry. In reference to tuberculosis I hold that without the seed there is no crop. The nature of the soil is also important, some soils being much more favorable to the growth of the germ than others. All applicants with organic disease in any portion of the vascular system must be accepted with great care. The following points are important: (a) Family history; (b) Personal condition; (c) Past history; (d) Collateral influence of occupation, habits, etc.

Dr. Hay, Toronto, emphasized the importance of completely exposing the chest. In a recent case a woman objected to exposing the chest and upon insisting, he discovered that one breast had been removed for malignant disease, and the other one showed infection also. The woman was even at that time under the care of a surgeon who proposed to remove the remaining breast.

Dr. Oldright, Toronto, considered that some cases of mitral regurgitation with good compensation were as deserving of acceptance as were many other cases which were shoved through. Moreover, that a man operated on for appendicitis with a good, clean, well-healed scar, should be accepted without difficulty.

Dr. Freel, Stouffville, said we have heard much good advice from the Medical Directors, but I would like to speak a word in behalf of the unfortunate examiners. The difficulty of getting correct answers cannot be over-estimated, especially as it is almost impossible to get accurate information concerning the habits and history of the applicant.

Dr. Britton, Toronto, considered that the examiner who was on the spot and, frequently, personally acquainted with the applicant, was in a much better position to judge of the acceptance of the risk than the Medical Referee. He considered that the Referees should pay more attention to the examiner's answer to the question as to personal opinion on the applicant.

Dr. Scadding and Papps replied to the various points that had been raised.

GASTRO-JEJUNOSTOMY, AS DONE BY MR. MOYNIHAN, OF LEEDS, ENGLAND.

By ERNEST A. HALL, M. D., C. M., Vancouver, B. C.

NO place in Great Britain will repay the medical visitor better than Leeds. True, it has lost one of the great pioneers in the surgery of the upper abdomen in Mr. Robson but his garment has indeed fallen upon his former associate, Mr. Moynihan, to whose extreme courtesy the writer is greatly indebted for the privilege of witnessing not a few of his operations.

The invasion by the surgeon of the territory, formerly occupied by the physician, is not more marked in any department than in that of the treatment of the stomach. No surgical manipulation is to-day, in the hands of competent operators, giving greater satisfaction than that of gastro-jejunostomy, preferably the posterior operation. The evolution of a method which combines simplicity and effectiveness with a minimum of exposure of the viscera, and practically without shock is one of the recent triumphs of surgery.

The incision, from four and a half to five inches in length is made through the inner border of the right rectus. The omentum and transverse colon are withdrawn and turned upwards over the epigastrium. The under surface of the transverse mesocolon is exposed, and the vascular circle, formed mainly by the middle colic artery is seen. A bloodless spot is chosen, a small incision made in the mesocolon, and the finger passed into the lesser sac. The opening in the mesocolon is then gradually enlarged by stretching and tearing until the fingers can be passed through it. The assistant now makes the posterior surface of the stomach present at this opening, and the surgeon grasps the stomach and pulls it well through. The protruded part of the stomach, about three inches in length, is now seized with a long bladed clamp, the jaws of which are covered with rubber tubing. The clamp is applied obliquely so that the part embraced in the clamp extends from the lesser curvature of the greater curvature upwards towards the cardia, but number that the stomach is turned upwards, that is, temporal in its longitudinal axis, the clamp must therefore be at right angle to the direction of the required opening, viz, in the left border of the greater curvature towards the pylorus. This angle is readily found by sweeping the finger along the under surface of the transverse mesocolon to the left of the spine. The stomach is then brought to the surface and a portion selected about eight

inches from the angle and is fixed in a second pair of clamps. The two pair of clamps are then placed side by side upon the abdomen. The transverse colon, omentum and the stomach, with the exception of that part embraced in the clamp are now returned within the abdomen.

FIG. 1.—The Stomach and Jejunum clamped and ready for suture. The clamps point towards the patient's right shoulder.

The operation area is now covered with hot towels wrung out of saline solution, the clamps with the parts of the stomach and jejunum, which they embrace alone being visible. The serous and subserous coats are now united by continuous suture. The length of the line of suture, as well as that section into the stomach will vary with the amount of dilatation. In extreme cases it may reach seven inches in length, it should never be less than two inches.

About a quarter of an inch in front of this line of suture an incision is made through the serous and muscular layers of stomach and bowels. As the cut is made these coats retract. This retraction should be facili-

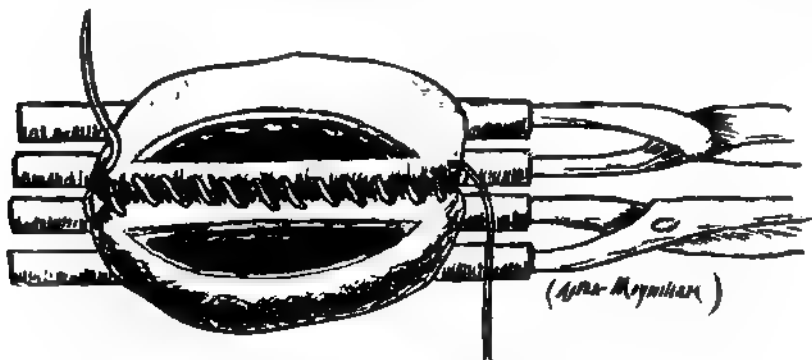


FIG. 2.—The posterior sero-suture applied. Section through stomach and jejunum, showing retraction of serous and muscular coats, and the elliptical portions of mucosa removed.

tated by slightly freeing the mucosa from the muscular layer. An elliptical portion of the mucosa, from two to six inches in length and from a quarter to a third of an inch in width is now removed. The

utmost asepsis is here observed, the mucosa being treated as septic. As the gastric mucous membrane shows a tendency to retract, it is seized by a pair of small vulcellum forceps on each side. Ligature of vessels is rarely necessary. The inner suture embracing all the coats of the stomach and jejunum are now introduced, the stitches being placed close together and drawn fairly tight so as to constrict all vessels. The clamps are now removed in order to determine the presence of any bleeding points. The primary suture is now continued without interruption all around the incision. There are thus two suture lines

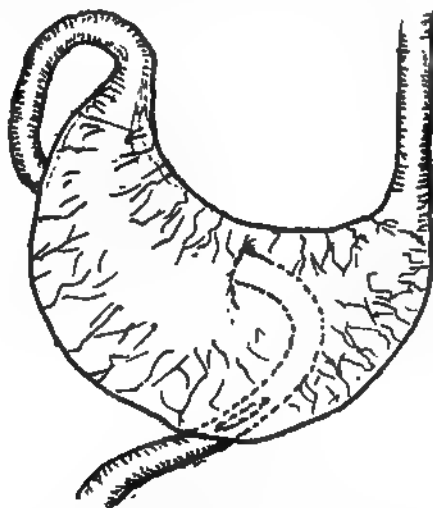


FIG. 3.—Showing the relation of Jejunum to the upturned stomach. Diagrammatic.

FIG. 4.—Showing the relation of the Jejunum to the stomach after approximation. Diagrammatic.

surrounding the anastomotic opening: an inner, hæmostatic, which include all the layers; and an outer, approximating, which takes up only the serous and subserous coats. The posterior surface of the gastro-colic omentum is then brought down to cover the attachment and stitched around the jejunum.

The parts are then carefully sponged with saline solution and the abdomen closed.

I have followed the author's plan of description, making slight additions in text and plates.

Dr. Hall operated on a case of acute suppurating appendicitis on board the steamship "Ivernia." When the vessel arrived in port the patient was doing well. This is probably the first time the operation was performed in mid-ocean.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

ON THE ELIMINATION OF STRYCHNINE IN NEPHRECTOMISED RABBITS.

In the *Journal of Medical Research* for July, Salant makes a study of the problem presented by the fact that whereas the kidney is admittedly the route of elimination of strychnine in the normal animal, yet, when this organ is removed, elimination is carried on during the time the animal survives. Rabbits were used for the experiments and they lived on an average three days after the operation. Examination was made to discover what became of the poison, as follows:—

1. The liver neither destroys nor retains strychnine; the same is true of the brain and spinal cord.

2. The physiological effect of strychnine is considerably impaired when treated with the contents of the large intestine.

3. The physiological effect of strychnine is markedly impaired when diluted either with water or organic matter.

4. The injection of the contents of the large intestine into frogs causes coma or paralysis. It contains therefore some toxic substance antagonistic to the action of strychnine.

On the whole, it would appear that the poison is profoundly affected by the contents of the large intestine, in such a way that it is not detected by the ordinary tests.

BACTERIA IN THE DEAD BODY.

In the *Medical Fortnightly*, July 25th, Gradwohl, of St. Louis, has an article on this subject based on examinations made in the morgue in that city of the blood of the heart and of the venous system immediately after death. The blood was withdrawn under aseptic conditions and cultures grown on agar. An analysis of the fifty cases reported shows that cultures from the heart's blood gave positive bacterial findings in 39 cases and negative in 11, even though in many of the cases every evidence pointed to the fact that they were not present during life. On the other hand, negative findings were the rule in cultures from the vein of the arm except in a few cases where there was a history of general sepsis before death, and in such cases the same bacteria were found after death as had been found in the pus from the site of infection.

This constant negative finding in the blood of the median basilic vein shows that there is little or no post-mortem migration of bacilli in this situation, while in the heart there is evidence that they approach it from organs such as the liver and intestines in which they are ordinarily found. Consequently, little if any evidence of importance can be derived from post-mortem examination of the heart in this regard, but the evidence from the venous system of the extremities is of greater value.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division ; Surgeon Toronto Western Hospital.

THE FIRST APPENDISECTOMY.

In 1827, Melier wrote on diseases of the appendix and reported eight cases. He credited Villermay, a friend and contemporary, with being the first to direct attention to disease of this organ.

In the same article it is stated that Dupuytren, the celebrated surgeon, on March 14th, 1814, opened an appendiceal abscess in one of the cases reported. Dupuytren was thus, probably, the first to operate for this condition, but there is no intimation that he understood anything of the pathology of the disease.

The first published article on perforation of the appendix was by Fitz, in the *American Journal of the Medical Sciences*, October, 1886.

In *Colorado Medicine*, June, W. W. Grant of Denver gives the full history of a case in which he diagnosed perforation in January, 1883 and operated for removal of the appendix in January, 1885. The patient was a woman, aged 22, a school teacher of Davenport, Iowa, who, early in the autumn of 1882, was taken with symptoms now known to be common to appendicitis. An abscess formed and opened in the right groin just below Poupart's ligament.

Grant first saw the case in the latter part of December, 1882, and diagnosed perityphlitic abscess from perforation of the appendix. Early in January, 1883, he operated, laying open the fistulous tract in the iliac fossa, but did not find the appendix, and feared to open the peritoneal cavity on account of the danger of extravasation and peritonitis. The wound was packed with iodoform gauze, but did not heal, and the liquid faecal discharge continued.

The wound was treated by irrigation and drainage with iodoform gauze and rubber tubes for the entire year of 1883, and until May 14th, 1884, when, on the recommendation and with the assistance of Prof. Edmund Andrews, of Chicago, a counter opening was made in the loin,

and both wounds connected posterior to the cæcum. Drainage with tubes was now continued but with no better success.

After six months, permission was obtained to open the abdomen and remove the appendix, so on January, 4th, 1885, Grant, assisted by Drs. W. D. Middleton and C. H. Preston of Davenport, opened the abdomen by a perpendicular incision over the cæcum. The anterior surface of the cæcum was not adherent, but its walls were thickened. The appendix was found excluded by firm adhesions from the peritoneal cavity. It lay retro-cæcal and pointed outward. No intraperitoneal adhesions were broken up for fear fæcal extravasation would infect the peritoneum. The base of the appendix was found, and with an aneurism needle a silk ligature was passed around it close to the cæcum, and the appendix was severed. The severed appendix was left firmly embedded in adhesions, and the greater part of the wound was closed, a gauze drain being left leading from the stump of the appendix.

The patient progressed favorably, but when the gauze drain was removed on the eighth day fæcal discharge was still noticed, proving that the ligature of the stump had not closed its lumen.

On May 12, 1885, a second laparotomy was performed. All adhesions involving the cæcum and stump of the appendix were broken up, and the gut brought well into the wound. The stump was inverted and two rows of Lambert silk sutures inserted. The wound was again drained from the stump with iodoform gauze.

This operation was also unsuccessful because of the unhealthy condition of the peritoneum involved in the sutures.

On January 26th, 1892, the third laparotomy was done. All adhesions were severed and the cæcum brought out of the wound. The opening in the stump readily admitted the index finger and was practically an artificial anus. It was closed by resecting the mucous, muscular, and serous coats, and uniting them separately by chromicised catgut. This line was now inverted and Lambert silk sutures inserted. Finally, these were turned in and shut up by a running stitch of chromicised catgut.

The operation was quite successful, the patient recovering rapidly and remaining well up to the present.

THE IMPORTANCE OF DIAGNOSIS OF DISEASES OF THE RECTUM.

In the *Medical Fortnightly*, June 10th, W. H. Stauffer urges the profession to give diseases of the rectum and anus that careful attention which their importance demands. From time immemorial diseases of the rectum has been in the hands of the charlatan, and for this state of affairs the medical profession is largely responsible.

The average patient who enters the office of the general practitioner makes his own diagnosis of piles, and is too often dismissed with an astringent ointment.

The deplorable fact is that often no examination is made at all by men who would never presume to trust any other part of the body without first making a careful examination.

The majority of diseases of the anus and rectum are very amenable to proper treatment, and the amount of benefit that can be conferred by a well skilled surgeon is really remarkable. It is thus most essential that in all cases a careful examination and proper diagnosis of the condition present should be made.

GYNAECOLOGY

Under the charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

PAIN IN THE DIAGNOSIS OF PELVIC AND ABDOMINAL DISEASES.

Dr. E. Stanmore Bishop, of Manchester, in his recent work on "Pelvic Diagnosis" makes the following remarks on "Pain as a factor in the diagnosis of Abdomino-Pelvic Disease."

Abdomino-pelvic pain is of three kinds, it is either continuous, intermittent, or a combination of the two—a continuous pain with intermittent exacerbations. Pain is a subjective sensation, not requiring any interference by the examiner in order to elicit it. Tenderness requires pressure before it can be determined.

In this region of the body, intermittent pain indicates neuralgia, or some obstruction to the free flow of the contents of one of the four great tubular systems present in the abdomen: the urinary, biliary, faecal, or, in women, the genital series. It is always dependent upon the peristaltic contractions of one or other of these tubes.

Continuous pain implies a pathological condition of some mesoblastic tissue.

Intermittent, neuralgic pain is referred to the abdominal skin. A slight touch increases it; firm pressure sometimes relieves it. Visceral pain is intensified in proportion to the pressure exerted, and a light touch does not evoke it. This statement does not refer to visceral tenderness. Neuralgic pain follows the course of the nerves and is sharp and darting. Visceral, intermittent pain is wave-like, becoming more and more intense and then dying away.

The combination of pain with tenderness is of great value. It enables us to distinguish ordinary or lead colic, in which there is severe pain, but no tenderness, from peritonitis or appendicitis, in which both are present; and gall-stone colic or urinary colic, with its recurring paroxysms of pain without tenderness, from empyema of the gall-bladder or perinephritic abscess, in which both pain and tenderness are well marked.

The time at which abdomino-pelvic pain appears, or rather its relationship in time to certain functions, will give great assistance.

Pain just after micturition suggests cystitis or stone in the bladder, or part of the lower ureter; pain during micturition, gonorrhoea or other urethritis; pain before defecation, ulceration in the rectum, acute prostatitis or metritis; pain during or after defecation, fissure; pain before menstruation, ovaritis or salpingitis; during menstruation, some contraction, organic or spasmodic, or some flexion of the uterine canal; and pain directly after eating, suggests ulcer of the stomach, two to four hours after, ulcer of the duodenum, and so on.

The character of pain is also of value in diagnosis. An intense, sudden, tearing rending pain, often severe enough to produce collapse, and usually associated with sharp vomiting, is common to a comparatively small class of cases. These are: Perforation of ectopic pregnancy, rupture of pyosalpinx, rupture of appendicular abscess into the general peritoneal cavity, rupture of gastric ulcer, of duodenal ulcer, of gall-bladder. Note that these are all ruptures of important organs, permitting the escape of irritant fluids into a healthy peritoneal cavity. One gets nothing like this in ascites, although the peritoneal cavity may contain far more fluid; or in tuberculous peritonitis, though here also the cavity contains fluid, and sometimes pus. In the one, the fluid is not irritating; in the other, the peritoneum is not healthy at the time when the fluid comes in contact with it.

In rupture of ectopic pregnancy there is usually previous good health except for pain. A pyosalpinx means infection of a septic character; there has been previous pain, and suspicious history. Duodenal and gastric ulcer imply previous dyspepsia, etc. An appendiceal abscess does

not rupture as soon as formed; very often there is a history of repeated previous lesser attacks of pain in the right iliac fossa, and always there will have been some hours, and, possibly, days of suffering before the intenser pain of rupture sets in.

In cases of intussusception which usually occur in children, you will hear from the mother that the child has had attacks of intense pain—and she will emphasize this very greatly—but at the time you see it, it will be probably fast asleep, evidently in no pain at all, and it naturally occurs to you that the mother is exaggerating, and that there is nothing more the matter than slight gastralgia. If in such a case you uncover the abdomen and place your warmhand upon it, moving it gently in various directions, at first the child will make no objection. You may, or may not, feel any mass at first; but your gentle friction will excite peristaltic action, and the child begins to cry. If you maintain your hand there, the crying becomes greater; the pain suffered is evidently more and more intense, until it reaches the acme, and then gradually it dies away again. It is wave-like. During the paroxysm of pain a mass may, for the first time, become palpable. If you have previously detected it, it becomes steadily harder and more defined as the pain increases.

The combination of pain with rigidity is important. So long as the peritoneal surface of a viscus is not inflamed, rigidity will not be present; thus, a gastric ulcer may cause pain, but if it has not reached the peritoneal coat of the stomach there will be no rigidity. Catarrhal appendicitis will produce pain, but no rigidity unless there be, as well, some peri-appendicitis. But directly the peritoneum itself becomes involved, rigidity, local or general, according to the extent to which this membrane is implicated, will become evident. Rigidity of the abdominal muscles is but temporary, as, when distension begins, showing septic paralysis of the bowel, rigidity passes away; but I believe it will always be found in the earliest stages if carefully looked for.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal.

ADHERENT PLACENTA.

Wells Teachnor, M.D., *Columbus Medical Journal*, June 1904, reports an interesting case of repeated adherent placenta. The patient, a white woman of strumous diathesis, at 24 years of age had a normal pregnancy and labor till the third stage was reached,

when an adherent placenta was encountered which was extremely difficult to remove. After normal health for a few years a perfectly normal pregnancy and labor occurred. In February, 1900, after a normal pregnancy, the placenta was found adherent to the fundus throughout and had to be removed piecemeal. The decidua was thickened and two patches of calcareous degeneration were found on the surface of the placenta. Moderate septic infection followed in spite of antiseptic precautions. In June, 1903, she was delivered of a healthy child but died from hæmorrhage while efforts were being made to remove the adherent placenta.

In a period of 14 years this patient had four pregnancies, three of which were complicated by adherent placenta.

A CASE OF HEMI-HYPERTROPHY IN WHICH THE INTERNAL ORGANS WERE AFFECTED.

Robt. Hutchison, M.D., *British Journal of Children's Diseases*, June, 1904, reports the following case:—

The patient, aged four months, was the fourth child of the family, the others being healthy. Nothing abnormal was noted during pregnancy of mother and labor was easy. The abnormal condition of the child was noticed at birth. When seen he was apparently healthy and well nourished and with the exception of the asymmetry nothing abnormal was noted on examination but three very small capillary naevi in the skin of trunk and limbs.

The head, tongue and face were quite symmetrical and all the digits were normal; the limbs on sides were of equal length. The girth of the left arm and leg was greater, being due to increase in the subcutaneous tissues, and represented a diffuse lipoma. The measurements showed that the circumference of the left limbs was from 1 1-2 to 2 inches greater than those similarly taken on the right. The circumference of the left chest at the nipple line was one inch greater than that of the right chest; while at the level of the navel the left side of the abdomen exceeded the right by an inch and a quarter. The child died of bronchopneumonia with left-sided empyema.

Post-mortem revealed that the increased girth of the left side of the body was due solely to deposit of subcutaneous fat. No other tissues were affected. The brain, pineal and pituitary bodies were normal.

In the case of "paired organs" those of the left side were almost without exception larger than those on the right. The heart was normal, the two lobes of the thyroid symmetrical, while the liver was normal in

size and shape but contained some multiple angiomata. The left side of the thymus was noted to be decidedly larger than that of the right.

The author concludes, "that the hemi-hypertrophy in such cases cannot be the result of any mere 'trophic' influence, but must date back to embryonic life, and be the consequence of unequal segmentation of the ovum."

PUBLIC HEALTH AND HYGIENE.

Under the charge of CHARLES HODGETTS, M.D., C.M., L.R.C.P., ED., Secretary to the Provincial Board of Health for Ontario.

HAY FEVER—RECENT INVESTIGATIONS ON ITS CAUSE, PREVENTION AND TREATMENT.

R. Ashleigh Glegg, M.B., Ch.B., D.P.H., Edin, in the July number of the *Journal of Hygiene* contributes an exhaustive article upon this interesting disease, which in brief is as follows:—

Part I gives an account of the history of hay fever since it was first accurately described by Bostock, of London, in 1819, referring to its geographical distribution and clinical symptoms. "In England, Germany and other countries of middle Europe it appears about the middle of May and lasts until about the end of July, whereas in the United States of North America (this, of course, to the English writer includes Canada) the disease is seen at different periods, *e.g.*, in the Northern States it occurs typically in the early summer, and again in the autumn, the earlier form being called June cold or spring catarrh and the latter is known as autumnal catarrh, which, beginning in August or September, lasts until the first frost. The factors discussed under etiology are: Geographical Distribution, Heredity—which is said to be marked, Sex, Age, Constitution, Temperament, Education, Social Position, Suggestion. In concluding this portion of his paper, he says in reference to the attack of hay fever being the outcome of either a gouty or arthritic diathesis: "These diatheses are indeed present in many instances, and in England especially gout and hay fever are frequently found in association amongst the rich and better educated; but hay fever cannot be explained as the result of the gouty diathesis, for the disease occurs in very many who have no gouty tendency." The former theories of the etiology are given at some length. "Hay fever affords an illustration of the familiar fact that the number of theories concerning the etiology of the disease is in inverse proportion to the state of knowledge of the subject." The results of recent researches, which were instituted by Dunbar with the pollen of grasses and other plants in 1902, are stated. "Up to the present time the pollen of 130 different

plants has been examined with regard to effects on persons liable to hay fever. The list of 114 plants tested by Dr. Kamman at the Hygienic Institution, Hamburg, which includes all those of toxic pollen is given in a table. Liefman, in a research conducted in this same institute, the complete reports of which will shortly be published, confirmed Blackley's statement that on days when attacks of hay fever are especially severe there is an unusually large amount of pollen in the air; that, in fact, the severity of hay fever attacks is in direct proportion to the quantity of pollen present in the atmosphere. He further proved that the amount of pollen inhaled by a patient on days when hay fever symptoms were present was more than sufficient to induce attacks; for it has been demonstrated that the quantity of toxin yielded by two or three pollen granules suffices to cause a distinct hay fever attack in some predisposed subjects." The structure and chemical constitution of pollen are explained and stated and the toxin is stated to contain a unit globulin and a highly toxic albumin. "So toxic is it, that so small a quantity as a forty thousandth of a milligramme of the common proteid, in solution, locally applied in the conjunctival sac of a hay fever patient is capable of causing itching and redness lasting for some hours" The general evidence that pollen toxin is the exciting cause is presented from which the writer concludes: It is evident that a toxin isolated exclusively from the pollen of certain plants is able to call forth in hay fever patients typical attack of the the disease. "Conversally," he argues, "we may conclude that hay fever, as it occurs in the different civilized lands, is really an etiologically indentical disease so far as the exciting cause is concerned—so constant have been the reactions shown to pollen toxin that it possesses distinct value as a diagnostic agent. Everybody admits the treatment in this disease has been up to the present unsatisfactory—the new treatment, which is discussed in Part II., of the paper is founded on a rational etiological basis—and should, theoretically, provide a cure for all symptoms of the malady. The details are given of the preparation of the Pollen Antitoxin, "Pollantin," from the horse together with the method adopted for its standardization. The fluid serum is chiefly suited for application to the eye by means of a pipette, for the nose it is used in a powder form, being sniffed up each nostril.

"In studying the best means to use pollen antitoxin in the treatment of hay fever the well known fact found in practice with other sera must be borne in mind, when antitoxin is brought into use, after the toxin has had time to enter into combination with the body cells, a hundred, or even a thousand times the amount sufficient to neutralise

toxin in *vitro* may be quite useless in treatment. It is therefore clear that the greatest importance must be attached to the prophylactic use of the serum, for this purpose patients are recommended to sleep during hay fever period always with their bedroom windows shut and to apply the 'Pollantin' regularly every morning a few minutes before getting up, both to the eyes and the nose."

"Exposure to the open air should be limited to a few hours at most. By this means according to experience a patient can guard himself from attacks for several hours, often indeed for the whole day. The use of the antitoxin is not followed by any ill effects, nor does it create a habit."

The use of subcutaneous injections is cautioned against as the results prevented its recommendation.

The paper concludes with a series of cases which have been treated in different places in Europe, nearly all of which point to its usefulness as a prophylactic.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

EXTIRPATION OF THE LACHRYMAL SAC FOR THE CURE OF DACRYOCYSTITIS.

Dr. E. W. Stevens, in *Colorado Medicine*, discusses the methods and indications for this procedure in the June number as follows:—

In the whole field of ophthalmic surgery there is probably no class of cases which gives more annoyance to the surgeon and discomfort to the patient than those of inflammation and stricture of the lachrymal passages.

As usually treated they are practically never cured. The patient is subjected to the annoyance of tears flowing over the margin of his eyelids, producing in many cases an eczematous eruption on the cheek. The regurgitation of the contents of the sac extends the inflammation to the conjunctiva, setting up and keeping up a chronic conjunctivitis. A large proportion of cases are liable to repeated attacks of acute inflammation of the sac with infection of the surrounding tissues and the formation of an abscess.

The point of greatest importance, however, in the pathology of dacryocystitis is the danger of an accidental abrasion of the cornea becoming infected by the contents of the lachrymal passages, and thus producing a septic corneal ulcer with all its attendant perils.

Of the pathology of dacryocystitis there is little or no difference of opinion. Stricture of the duct is admitted to be the chief, if not the

sole cause of the affection. Stricture may be brought about by extension of inflammation from the nasal mucous membrane, the cicatrization of ulcers in, or in the neighborhood of the nasal duct, the presence of polypi or other tumors and by injury or disease of the neighboring bones.

We may in general terms, divide the treatment of lachrymal obstruction and dacryocystitis into two heads: (1) Conservative treatment, (a) by small probes, and (b) by large probes; and (2) radical treatment by extirpation of the lacrimal sac. The probe treatment is usually supplemented by the injection of antiseptic and astringent solutions, and particularly is this true of those surgeons who use small probes through an intact canaliculus; amongst whom are such distinguished ophthalmologists as Von Mitchell, of Berlin, Schroeder, of St. Petersburg, and Adelheim, of Moscow. The majority of the European surgeons, however, first slit the canaliculus as a preliminary to probing, although it is exceptional for them to use large probes.

On the other hand, the American school of ophthalmologists influenced by the teachings of Williams, of Cincinnati, Noyes, of New York, and Theobald, of Baltimore, lays great stress on the importance of using large sounds in order thoroughly to dilate the stricture. There can be no question regarding the great superiority of this method of treatment as compared with the use of small probes.

The duration of treatment will extend to months and years, and there is usually a relapse even after an apparently excellent result has been attained. Frequently the patient, discouraged and weary of the long and painful course of treatment and hopeless of ever arriving at a permanent cure, is lost sight of.

The radical treatment of this affection consists in the removal of the lacrimal sac. The following is the method of removing the sac advised by Rollet, of Lyons, France. An incision about 15 mm. long, but varying in accordance with the size of the tumor, is made, starting from the level of the internal palpebral ligament and descending at first perpendicularly and then being directed to the outer side. It thus describes a curve running parallel to that which is formed by the crest of the ascending process of the superior maxilla which can be felt with the finger. The aponeurotic layer which covers the external wall of the sac is next incised. This is followed by a dissection of the fibrous layer, thereby exposing the anterior wall of the sac. The postero-internal portion of the periosteum and the external wall of the sac is next freed by means of a cutting raspatory. The cupola of the sac is next disengaged and the whole sac cut away from its attachments at the level of the nasal duct. The last step is to curette the nasal duct. After the

arrest of hemorrhage a flat dressing is applied, but neither drainage or sutures are used.

The scar is usually insignificant and hard to see. Suppuration is cured immediately the operation is performed, as well as all irritation and inflammation of the conjunctiva. The watering of the eye disappears with the cause of the hypersecretion, namely, lachrymal inflammation, and it is only when exposed to wind, dust, smoke, etc., that any epiphora is observed. In about 67 per cent. of cases no abnormal lachrymation exists.

Many ophthalmologists only resort to extirpation of the sac when other means have been fully tried in vain. On the other hand, Volckers, of Kiel, after performing over 500 extirpations, recommends the operation in all but the very mildest cases. He considers lachrymal obstruction to be a standing menace to the safety of an eye amongst the laboring classes, since working men and women cannot submit to a long course of treatment, while they are the very people most prone to receive slight eye injuries.

Fuchs, of Vienna, resorts to removal of the sac under the following circumstances: (1) When extensive cicatricial contractions are present or when the nasal duct is completely obliterated; (2) when atony and dropsy of the sac are present; and (3) when the patient's circumstances forbid a prolonged course of treatment.

Most operators will find themselves in accord with the generalization of Herman Knapp, that extirpation is indicated in all those conditions in which "an important lachrymal disease can not so well or not at all be cured otherwise."

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

THE TREATMENT OF TUBERCULAR LARYNGITIS.

S. E. Solly, M.D., Colorado Springs, in a paper read at the recent meeting of the American Laryngological, Rhinological and Otological Society (reported in June *Laryngoscope*), notes the very high mortality from this disease and the hopelessness with which it is too frequently combated. He thinks the chief reason for the high mortality is the almost invariable pulmonary disease and more important the feeble resistance found in the individual, as shown by the extension of the disease from one organ to another during the first stage of the attack,

furthermore, the local treatment of laryngeal tuberculosis to be successful demands special skill, experience, courage and patience on the part of the physician and faith and fortitude on that of the patient. Though we are able to save comparatively few cases of this disease, we are able, by judicious local treatment, to save a large number from the direful distress of an unchecked tubercular laryngitis.

The first essential of treatment is to place the patient under the best hygienic conditions, especially the open air treatment in a good sanitarium. The second is a change to a good climate of which the preferable elements are in their order, dryness, sunshine, cool air, and a high altitude. The third is local treatment by an experienced laryngologist. Solly lays stress upon absolute rest of the voice—a point too often neglected. Pulmonary tuberculosis is not unfrequently preceded by a non-tuberculous laryngitis, which often masks its approach to the invasion of the larynx by tuberculosis. Attention is drawn to the necessity of attending to the nose and naso-pharynx. Solly thinks these regions should be treated as radically as the case demands and the general condition of the patient permits, more can safely be done than is usually thought. Cold inhalations are usually best, especially the compound tincture of benzoin, one part; glycerine, one part; and alcohol, one and a half parts. This is also of great benefit to the bronchitis, accompanying tuberculosis of the lungs. In cases of tubercular infiltration of the larynx, without ulceration, he advises sub-mucous injections of about 30 minims of a 15 per cent. watery solution of lactic acid, preceded by an injection of cocaine and adrenalin. Lugol's solution, with an equal quantity of alcohol or glycerine, painted lightly over the parts, is also of service. When there is decided pain, particularly on swallowing, there is in most cases an ulcer which may be seen, owing to swelling on the parts. A frequent seat is the under surface of the epiglottis. The pain produced by these ulcerations is markedly lessened by the use of pure lactic acid. If curettage is necessary, it is best employed about three days after the use of lactic acid. Orthoform is not recommended by the author. Solly concludes his paper by saying that "most physicians are far too timid in handling a tuberculous larynx, resorting in their blindness to superficial treatment, and to sedatives in their mistaken kindness, when in most cases they had far better use the radical measures herein indicated."

Harland, *Laryngoscope*, June, 1904, cites an interesting case of excessive hemorrhage following the removal of a faucial tonsil with a Matthieu tonsillotome. Various astringents and styptics were used but recourse to the Paquelin cautery was eventually necessary.

X-RAY THERAPY AND SKIAGRAPHY.

Under the charge of JOHN McMASTER, B.A., M.D., C.M., Toronto.

X-RAYS AND INTERNAL FLUORESCENCE.

Numerous reports are to hand by different x-ray operators of the favourable effects of x-rays upon malignant lymphoma, or Hodgkin's disease, on lympho-sarcoma and in the different forms of leukæmia. Morton, of New York, has used, in some of these varieties of lympho-sarcoma, internal fluorescence. He administers 10 grains of quinine bi-sulphate, or fluorescence, half-an-hour before making the exposure, and claims better results than without it.

Trials should be made of this therapy in all these otherwise fatal maladies and the results noted. At present, it seems as if great possibilities are open to experimenters along these lines. Pernicious anæmia is another form of blood dyscrasia that may be amenable to x-ray influence, especially under internal fluorescence.

X-RADIANCE IN EPILEPSY.

A considerable number of cases of epilepsy of varying duration have been given x-ray treatments, and the results reported in the Journals. When the condition has not been established for a long time, the results are very encouraging, and especially is this the case in young subjects. It is generally accepted that x-ray treatments, if not pushed beyond the proper limit, stimulates protoplasm into greater vital activity, and this may be the cause of the improvement in this class of cases.

Dr. Brantt, New York, gives three treatments a week, beginning with five minute exposures at fifteen inches distance, and by degrees increases to ten minutes at ten inches. A different part of the skull was exposed at each sitting, and a tube of high penetration used. The hair drops off usually near the parts exposed, but returns again later in stronger growth. In some cases the bromides can be dispensed with; in others, small doses prove beneficial. In young subjects a gain of weight soon results, and a marked improvement in the mental faculties takes place. The impediment of speech, which occurs in severe cases of long standing, has been removed by the raying; and the attacks, which numbered from six to ten a day, would be reduced to one every two or three weeks.

It is to be hoped that these results will be confirmed by others. I recall a case where I took two radiographs of the head with a view of locating the cause of the seizures. He had no attacks for over two months following the exposures.

PROVINCE OF QUEBEC NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Montreal.

The summer of 1904 has been no less deadly to infants in Montreal than that of 1903, and the record of over one hundred deaths in a single week has rarely been surpassed. Dr. Laberge, the Medical Health Officer, has on several occasions published statistics and reported to the aldermen facts bearing upon the various causes which operate to produce such a condition of affairs. Efforts have been made to abolish privy-pits and other sources of infection, and in this work over 7,000 pits have been done away with in the past three years, and it is hoped that shortly none will be left.

An association has been formed during the past summer which promises to be of great assistance to mothers in the care of their children. Several physicians, with the Chairman of the Health Committee founded the "Association de la Goutte de Lait," the aim of which is to provide sterilized milk for the infants of the city,—as yet the organization has not received its English name.

Arrangements were made with the best milkmen for the supply of pure milk, afterwards modified by the Montreal Foundling Hospital, and the Sisters of Mercy, to suit the individual cases. This milk is then distributed in hermetically sealed bottles throughout the city, where it is sold at cost price; although it is given free of charge to those unable to pay for it. So far, sick infants alone are supplied, but at a later date the association will provide for both sick and well. Each bottle, in order to ensure the condition of the milk, contains only enough for one feeding, except under special circumstances when larger quantities may be obtained. The city council has been asked to print literature on the care of babies which is to be distributed from the dispensaries and a grant of \$4,000 has been asked from the finance committee to put the work upon a solid basis. As ice is almost essential to the preservation of milk in hot weather the association has also been considering the distribution of this commodity at such a rate that it will be within reach of everyone.

Officers of the association were elected as follows: Hon. President, Mayor Laporte; President, Dr. I. Cormier; First Vice.-President, Dr. E. D. Blackader; Second Vice.-President, Dr. J. Dube; Secretaries, Dr. D. S. Evans and Dr. G. Boucher.

A great deal of interest is being shown in Montreal in regard to the Canadian Medical Association meeting at Vancouver, and several parties have been formed for the trip, among the Montreal men taking

part in the meeting by reading papers are the following: Drs. J. W. Stirling, H. E. Garrow, F. J. Shepherd, J. B. McConnell, D. E. LaCavelier, R. H. Craig, M. E. Abbott, T. A. L. Lockhart, Jas. Bell and S. F. Wilson.

Recorder Weir has again scored against adulteration of food in the city when he had a large consignment of rotten figs which were to be used in making "strawberry" and "raspberry" jam, condemned and incinerated. The accused was permitted to go after receiving a lecture and paying costs.

An interesting series of pathological reports upon all the cases of cancer coming to autopsy at the Montreal General Hospital and the Royal Victoria Hospital has been completed. This series has been investigated in connection with the work of the committee of the Cancer Research Fund of Great Britain, which is obtaining records of more than ten thousand cases of cancer which have been examined microscopically.

Out of 3,275 recorded autopsies there have been found 275 cases of malignant neoplasm, and of these 212 were of carcinoma, and 63 of sarcoma, 56 per cent. being in males. In the carcinoma series, 60 per cent. were found in the alimentary canal, and in turn 62 per cent. of these occurred in the stomach. Of this class of malignant growth, only 1.9 per cent. were found in those under 25 years; 6 per cent. between the 25th and 35th years; and 6 per cent. between the 35th and 40th years. Of the sarcomata, 6 per cent. occurred before the 10th year; 11 per cent. before the 25th year; and 30 per cent. between the 46th and 60th years. In comparing these figures with those already in the hands of the committee, there are a few striking variations from the statistics taken from the London hospitals, but they coincide very well with some of the continental series.

The report of the Montreal Medico-Chirurgical Society for the past session shows that fourteen papers were read and twenty-one cases reported. A large number of living cases were presented and three lantern demonstrations given. The average attendance was fifty-four which is the largest for some time past. Among those who contributed papers were Drs. Osler, Goldthwaite, Cushing, Primrose, and Prof. Rutherford.

The council has considered a number of questions of vital interest to the members of the Society and the profession at large, among which were the proposed change of tariff by the Canadian Nurses Association, the medical inspection of schools, and the suggestion that hospitals and dispensaries shall be asked to consider the regulation of free treatment to those able to pay for medical attendance.

MEDICAL SOCIETIES AND GATHERINGS

MARITIME MEDICAL ASSOCIATION.

The fourteenth annual meeting of the Maritime Medical Association opened at 10 a.m., July 6, 1904, in St. Paul's Parish Hall, Halifax, N. S., the President, George M. Campbell, M.D., being in the chair.

The minutes of the last annual meeting were read and approved. A letter of regret, at his absence, was read from Dr. H. D. Hamilton, Montreal. Letters were read from the Management of Victoria General Hospital and Nova Scotia Hospital, inviting the members to visit these institutions.

Dr. G. C. Jones, Chairman of the Local Committee, then gave an address of welcome.

The Nominating Committee was appointed, by the President, as follows: Drs. W. B. Moore, Kentville, N. S.; C. D. Murray, Halifax, N. S.; McKenzie, Dartmouth, N. S.; G. C. VanWart, Fredericton, N. B.; G. A. B. Addy, St. John, N. B.; F. H. Wetmore, Hampton, N. B.; R. McNeil, Charlottetown, P. E. I.; Ross, Alberton, P. E. I., and F. P. Taylor, Charlottetown, P. E. I.

THE PRESIDENTIAL ADDRESS.

The President, G. M. Campbell, M.D., of Halifax, now gave his address on "A History of Vital Statistics."

Statistics originally denoted enquiries into the condition of a State. The Romans were careful to obtain accurate information regarding the resources of the State, and they appear to have carried on the practice of taking a census with a regularity which has hardly been surpassed in modern times. But it was not until within the last three centuries that systematic use of the information available began to be made for purposes of investigation and not of mere information. The earliest work was published in Venice in 1583. Achenwall (1719-1772), the "father of modern statistics," is usually credited with being the first writer who made use of the word "statistics," which he applied to his collection of "Noteworthy Matters Regarding the State." In any case statistics, in the modern sense of the word, did not really come into existence until the publication of a work by J. P. Suosmilch, a Prussian clergyman. In this book a systematic attempt was made to make use of a class of facts which, up to that time, had been regarded as belonging to "political arithmetic," under which description some of the most important problems

of what modern writers term "vital statistics" had been studied especially in England.

Quetelet published his work in 1835, and, as a result, "The Statistical Society of London" was founded in that year, and, in 1837, the first Act was passed in England for the registration of births, deaths and marriages.

The Statistical Society of London has had a considerable and very useful influence in the practical work of carrying out statistical investigation in the United Kingdom and elsewhere.

In 1761, an Act was passed in Nova Scotia for the registering of marriages, births and deaths. Proprietors' clerks were appointed registrars in the respective townships. They received a fee of sixpence from those getting married and from the parents and nearest of kin of those born or dying. Those refusing to comply were subject to a fine of five shillings. Their goods were subject to a levy if not paid in four days. In the same year was passed an Act to prevent the spreading of contagious distempers. In 1782 the Act was amended, town clerks to be registrars instead of proprietors' clerks. The fee for each registering was made one shilling.

In the Provincial Statutes of Nova Scotia, 1851, First Series, the next reference to the registry of births, deaths and marriages is found. (Chap. 123, page 328). In 1861, a bill was introduced into the Legislative Assembly, but no further action was taken. At a meeting of the Medical Society of Nova Scotia, held Oct. 1st, 1861, at the residence of Dr. (now Sir Charles) Tupper, the following resolution was moved by Dr. Tupper and seconded by Dr. W. J. Almon (Dr. Almon died two or three years ago and had been a Nova Scotia senator for many years.)

"Resolved that this Society request all its members to forward an annual register of all cases attended by them and the result, and also the cause of death in all fatal cases; and that a committee be appointed to carry out the above object."

This resolution passed unanimously and Drs. Tupper, Almon and Gossip were named as the committee.

On Feb. 2nd, 1864, Dr. Lewis read an essay before the Society on "The Vital Statistics of Nova Scotia," showing the necessity for a proper registration of births, marriages and deaths. At a meeting of the Medical Society on March 1st, 1864, the committee appointed at last meeting reported as follows:—

"That finding from the speech of His Honour the Administrator of the Government at the opening of the House of Assembly that a bill was to be brought forward by the Government during the present session,

providing for a proper registration of births, marriages and deaths, and that any action that it might have been disposed to take in the matter had been thus forestalled, they determined to supply those interested with all the information on the subject in the possession of the Society, and for that purpose ordered the publication of the essay by Dr Lewis on "The Vital Statistics of Nova Scotia." "

The Attorney-General introduced the bill, viz.: Solemnization of Marriage and the Registration of Marriages, Births and Deaths. The bill passed and is found in the Revised Statutes of 1864 (Chap. 120, page 414).

At the time of Confederation, July 1st, 1867, the Dominion Government took over the Nova Scotia plan of vital statistics. In Ontario, however, the Ontario Legislature passed an Act in 1868-9 for registration of births and deaths

Dr. (Hon.) Charles Tupper contended that under the British North America Act, the Dominion Government had sole control of vital statistics.

Hon. Alex. Mackenzie thought otherwise. That it belonged to the local legislature.

On Feb. 17th, 1875; Hon. Alex. Mackenzie, said that Ontario alone had a regular system of collecting vital statistics and even in that province the returns were so unsatisfactory as to create a good deal of discussion upon the question of adopting some other means to secure more complete returns. In Quebec there was a parochial system of obtaining statistics respecting burials, baptisms and marriages, which were perhaps more correct than Ontario although the system was deficient in other respects. There was a system in operation in Nova Scotia but it was of little use and in other provinces there was no system at all. For his own part it was a subject to which he had given considerable attention and he would continue to give it as much attention as he could possibly spare from his other public duties.

Hon. Chas. Tupper complained of the terms in which the First Minister had referred to the Statistical Department in Nova Scotia. It certainly compared favorably with that of Ontario, though not so comprehensive in its character.

Hon. Alex. Mackenzie remarked that it was a comparatively useless expenditure and that the Government was only justified in retaining it by the hope that something better and more complete would be brought into operation.

On Feb. 21st, 1877, Mr. Brouse moved for a select committee to examine and report upon the subject of Vital Statistics and Public Health.

Hon. Chas. Tupper said he had entertained the hope from a statement made by the First Minister on a former occasion that this matter had received and was receiving the careful consideration of the administration. The question of statistics, whether vital or otherwise, under the Union Act had been placed exclusively within the control of the Dominion Parliament and the attention which had been given to the subject by the local Government of Ontario he held was entirely unconstitutional. No branch of statistics could be compared in point of importance with vital statistics.

No provision was made in the estimates so the Dominion Government ceased conducting the statistical department of Nova Scotia.

Why did the Dominion Government take over the statistical department of Nova Scotia in 1867 and allow Ontario to pass a local Act in 1868-69? The fathers of confederation might well have added to their laurels by passing a Dominion Registration Act.

It is the opinion of a lawyer in this city whose knowledge is "microscopic" as well as "macroscopic" that the local legislatures are at liberty to deal with vital statistics.

The Maritime Medical Association is meeting for the fourteenth time. I hope that before the Association attains its majority that we will see a Dominion registration for marriages, births and deaths, and that we will have a Dominion diploma entitling a man to practise anywhere throughout Canada.

Moved by Dr. McNeil and seconded by Dr. Birt that a vote of thanks be tendered the President and the address be referred to a committee consisting of Drs. March, McNeil and Addy.

COMMON AND UNCOMMON AFFECTIONS OF THE FEET.

Arthur Birt, M.D., C M., Edin., Berwick, N.S., then read a paper on Some Common and Uncommon Affections of the Feet met with in Practice.

Many of these conditions entail considerable pain and disability on the patient, who may indeed be quite convinced of your ability to remove his normal appendix at a moment's notice, but who naturally looks askance at your failure to cure his "pet corn" or to discover that his so-called rheumatic or gouty foot has a broken down arch.

The Weak or Flat-foot deserves the first mention. The following case will serve as a type: An unmarried female, aged 40, applied for the relief of "rheumatic" pains in the legs, feet and distressing back-ache. She had been treated for rheumatism without effect, and had

also been subjected to a vaginal fixation of the uterus with the object of removing the backache and other minor and presumably pelvic symptoms. This treatment had not, however, resulted in any improvement. No results were obtained until after the detection of a well marked bilateral flat-foot led to measures directed to supporting and strengthening the arches, which promptly led to improvement in the symptoms and which later almost entirely disappeared.

Etiology.—I have met with this and its allied conditions much more frequently in women than in men. The most important factor in its causation is ill-fitting and wrongly-shaped boots. Improper postures, deficient muscular development, overstrain after exhausting illnesses or pregnancy, other deformities (*e.g.*, corns and bunions), and direct injury all predispose.

The symptoms vary in severity from a simple sensation of weakness and discomfort referred to the inner side of foot and ankle, to marked aching or neuralgic pains in the calf muscles and the lumbar region, and almost complete incapacity for even moderate use of the feet in walking or standing. The painful sensations in the feet are aggravated by cold and damp and relieved by rest. Hence they are often ascribed to gout or rheumatism by both patient and practitioner.

Congenital Talipes Equino-Varus.—One is consulted now and then by an anxious mother who has noticed the feet of her infant or young child turn in and out too much. A sharp distinction must be made between the congenital and acquired forms, for in the paralytic club-foot we have not alone the deformity, but also a loss of power of the muscles to hold the foot in the proper position.

Metatarsal Neuralgia.—The researches of Goldthwaite, of Boston, have cleared up the pathology of this condition and shown that the symptoms really depend on weakness of the anterior metatarsal arch of the foot, formed by the heads of the metatarsal bones. That this weakness or deformity is of varying degrees, and that the symptoms and character of the pain vary accordingly. Morton's typical neuralgia which he attributed to pinching of the plantar nerves by the adjoining fourth and fifth metatarso-phalangeal articulations, is only one expression of weakness of the anterior arch and each individual case must be judged on its merits.

Ill-fitting shoes is a leading factor in the production and maintaining of this painful affection. Practical immunity from the attacks of pain has resulted in several cases met with, for about a year, from the simple expedient of banking up the shoe so as to support the arch,

widening the tread of the shoe and thickening the sole and heel a little on the inner side, with simultaneous treatment of the painful callosities over the heads of the metatarsals.

Charcot's Disease of the Joints.—Some years ago I had under my care a woman with a well established syphilitic history, who at one period developed rather rapidly a painless effusion into the ankle joint which was followed by bony hyperplasia and finally subluxation. It was free from tenderness at all times, but marked crepitus could be elicited whilst all the ligaments about the ankle and medio-tarsal joints became markedly relaxed and marked bony thickening developed. These characteristics together with the luetic history led to further examination, with the result that a well-marked Argyll-Robertson pupil, and complete loss of the knee-jerks along with one or two disturbances of sensation soon established the diagnosis of Charcot's joint in a patient suffering from *tabes dorsalis*.

In obscure cases of osteo-arthritis in middle-aged subjects it would be advisable to examine the condition of pupils, reflexes and sensation in order to eliminate *tabes*, as these arthropathies (Dana—Diseases of the Nervous System, p. 238) come on in the prodromal and early stage of the disease in over half the cases, and are often at first unrecognized.

Gonorrhæal Teno-Synovitis.—A young married woman complained to me of "rheumatism of the foot," the pain felt chiefly in the heel but radiating also up the leg. Examination showed a well-marked synovitis of the tendo achilles and to a slight degree, tenderness, heat and puffiness in the region of the ankle and mid-tarsal joints. I had treated the husband previously for a specific urethritis, and there was definite evidence of pelvic infection in the wife. Otherwise I should certainly have failed to recognize the condition.

Hammer Toe.—The condition may be congenital but is usually acquired, often at an early age, from the pressure of too short shoes and socks, the second toe suffering most on account of its relative length. It is usually bilateral. The treatment in my hands has not always been satisfactory. Some time ago, however, I read an article by Mr. Thomas, Senior Surgeon to the Birmingham Orthopedic Hospital, urging a trial of the "tomato" splint. This splint, which I shew you, is made in six sizes by Down Bros. of London, and from even a limited experience I can strongly recommend a trial of it. In the cases that are not cured by this method, resection of the joint as recommended by Whitman is to be advocated and preferable to mutilating the foot by amputating the toe.

Ingrowing Toe Nail.—This is most commonly due to improper hygiene of the feet. Sweating feet with lack of cleanliness, improperly trimmed toe-nails and narrow-toed boots offer the best conditions for a suppurative process near the anterior edge of the nail. The epidermis becoming macerated, a small amount of friction between the edge of the nail and the skin will be sufficient to cause an excoriation. When this has once occurred, every step taken rubs the coccus-laden dead epithelium into the mouths of the lymphatics and an ulcerative condition soon results.

In the early stages appropriate treatment will often arrest the process. This consists of (a) antiseptic foot-baths, (b) daily changing of stockings with sprinkling into them of unirritating antiseptic powders, (c) packing of antiseptic gauze under the edge of the nail, and (d) the wearing of correctly patterned shoes. Far superior to their predecessors in the treatment of this affection are formaldehyde and picric acid. The great advantage of the former is that in addition to its powerful antiseptic action it undoubtedly cures in a majority of cases the associated hyperidrosis and bromhidrosis. Gerdeck experimented on a large number of soldiers and found formaldehyde best used as (a) a powder mixed with some inert powder in the strength of 20 to 100 for sprinkling in the stockinge, and (b) as the concentrated solutions and its attenuations with water for painting on the feet.

CONCLUSIONS.

(1) That a more careful study of the anatomy and especially the physiological mechanism of the healthy foot will result in the detection of many minor disabilities which can be remedied or cured to the great advantage of both physician and patient.

(2) That deformities of the flat foot class may give rise to so-called neuralgic or rheumatic symptoms in the legs and back which may lead the practitioner quite astray if methodical examination of the anatomical condition and functional activity of the feet be omitted.

(3) That local affections of the feet may first call attention to the presence of some general disease, *e.g.* the perforating ulcer of the foot in *tabes*.

(4) That the rarer vaso-motor and other affections of the feet should be borne in mind so as to avoid being led astray on their occasional appearance.

(5) That in the minor operative measures undertaken for the correction of foot deformities the same scrupulous care should be observed in

antiseptic technique as in a major operation—perfection of result depending largely on this factor.

(6) That a diagnosis of "rheumatism," localized to the feet, should not be made until a thorough examination has eliminated the class of deformities and disabilities referred to.

GALL STONES IN THE COMMON DUCT.

Dr. A. B. Atherton, Fredericton, N.B., followed with a paper, "A case of Gall Stone in the Common Duct without pain; operation; recovery."

A discussion followed this paper. Dr. Birt thought the paper enforced the need of the exploratory incision in acute abdominal diseases. Dr. McKeen, Glace Bay, advocated the use of drainage, instead of stitching, after operations on the common duct, the better plan being not to attempt suture. Dr. Cullen, of Baltimore, emphasized the idea of early exploratory operation, not only in the common duct but also in the stomach, when affected. He also thought it wise to leave a good sized drainage in the duct. Dr. Atherton then replied.

REPORT ON THE PRESIDENT'S ADDRESS.

Committee on President's address now submitted the following report :

To the President of the Maritime Medical Association and Members

We, your committee, to whom was referred the President's address, beg to report as follows :

1. That we heartily approve of the importance of vital statistics: and congratulate the President on the amount of historical information gleaned by him, which must be of value to every man in these Provinces.

2. We recommend that the Federal Parliament be memorialized on the subject with a view of obtaining full, practical and uniform legislation for the whole Dominion.

3. We would recommend that the whole text of the President's address be published in the *Maritime Medical News*.

All of which is respectfully submitted. H. A. March, chairman, R. McNeil, G. A. B. Addy.

Moved by Dr. McNeil, and seconded by Dr. Trennaman, that the report be accepted.

ACUTE SUPPURATIVE PERIHEPATITIS.

Dr. VanWart, of Fredericton, N.B., then read a paper on a case of the above disease with operation and recovery.

Mr. R., male, unmarried, aged 21, occupation laborer in a saw-mill, admitted to hospital, Dec. 26th, 1902. Present illness began Dec. 20th, 1902.

Present State—slight aphasia, temperature 101.4, pulse 80, respirations 20, skin dry, tongue much coated, breath offensive; no sweating, chills or jaundice, bowels loose; Urine highly colored, sp. gr. 1024, no sugar, albumen or bile. The lower border of the liver extends anteriorly one inch below costal margin of ribs, and is very tender on pressure.

History of Illness.—On Dec. 19th, while handling lumber, patient felt a pain in right side. The following night the pain became more severe, with cramps. He had also nausea, vomiting and looseness of the bowels. The temperature kept rising and he had been ill a week when his physician ordered him to the hospital. After a careful examination I concluded there was pus in or about the liver, and that an exploratory incision was the only rational remedy.

In making a differential diagnosis, the physical signs were abdominal, not thoracic. Previous good health, sudden onset, localized pain and tenderness on pressure, a history of traumatic irritation and muscular rigidity pointed to pus about the liver. The absence of chills and sweating excluded pus in liver proper.

Operation, Dec. 28th.—An incision was made, beginning two inches below the costal margin of the ribs, in line with the tenth, downward and outward, for three inches. On examining the middle of the right lobe of the liver, anterior and upper surfaces, I could detect fulness and fluctuation, also slight adhesion between the liver and thoracic wall. Appendix vermiformis was normal.

I opened the swelling with my finger, having previously walled off the adjacent parts with sterile gauze. A free escape of odorless pus followed. Capsule of liver was felt intact. The cavity was well wiped out with gauze pads and a gauze drainage inserted to the bottom of the cavity.

Dec. 29th.—The outside dressing was removed, there was free escape of odorless pus and patient comfortable.

Dec. 30th.—A.M., temperature normal, pulse 80; p.m., temperature 100°, and pulse 86.

Dec. 31st.—The gauze drain removed and cavity irrigated with normal saline solution. A piece of rubber drainage tube was introduced. The wound was irrigated and dressed daily until pus ceased to come away. It was allowed to heal by granulation.

Jan. 2nd, 1902.—Pulse and temperature continued so until discharged from the hospital on Feb. 24th.

July, 1903.—Patient reports he is in good health. Has taken on flesh. Incision sound.

This is a case of acute suppurative perihepatitis due to traumatism. The rarity and points in diagnosis led me to report the case.

In discussion, Dr. E. A. Codman, of Boston, asked if the appendix was normal and whether, after making incision, it could be seen that the cause was not the appendix. Also stated that, in making diagnosis, great care should be taken to find out the cause of trouble.

Dr. Atherton, of Fredericton, reported a case of perforation of small intestines due to heavy lifting.

Dr. Cullen, Baltimore, agreed with Dr. Codman that the essential point is to get at the cause of the trouble, and where a definite diagnosis cannot be made to explore at once. He cited a case where, a few days after heavy lifting, a perinephritic abscess developed.

Dr. VanWart, in replying, said that the appendix was normal.

PELVIC HEMORRHAGES.

The President of the Nova Scotia Medical Society, Dr. Chisholm then read his address on Pelvic Hemorrhages. Before taking up the discussion of the subject, he referred to those who had died during the year, viz.: Drs. D. H. Muir, Truro; H. D. Densmore, Elmsdale; F. S. Wade, Maitland; R. A. Dakin, Pugwash; P. C. C. Cameron, Westville, and Mr. Hardy, a fourth year medical student, who died in Labrador.

In discussion of this paper, Dr. Cullen congratulated Dr. Chisholm on his able address and the success which had attended the different cases reported. He also spoke of several somewhat similar cases in his own practice. He recommended early operation.

BLOOD EXAMINATIONS.

Dr. D. G. J. Campbell then read a paper written by Dr. C. Simon, of Baltimore, who was unable to be present. The subject was Blood Examination in Suppurative Cases.

Drs. Addy and Cullen spoke on the paper, the latter quoting the following cases: Pain in the iliac fossa, absence of eosinophyles, no rigidity but found abdomen full of milky fluid. Appendix adherent and it was removed. Found a stricture of intestine and a perforation of ascending colon.

MEDICAL FEES.

Dr. Henry P. Clay, Pugwash, N.S., followed with a paper on Medical Protection.—Insurance fees, Railroad fees, etc.

Dr. Farrell thought that Dr. Clay deserved encouragement and should receive some endorsement from the Association, and moved that a committee be appointed by the Chairman to deal with any grievances

contained in Dr. Clay's paper and take up the subject of medical fees, etc. Seconded by Dr. Walker. Carried.

The President then appointed Drs. Farrell, H. Stewart and Wetmore as a committee to confer with Dr. Clay and report to-morrow.

EVENING SESSION.

UTERINE HEMORRHAGES.

The first paper was that of Dr. Cullen, of Baltimore, on Uterine Hemorrhages and their causes. His address was illustrated by drawings. This paper will appear in a future issue.

In discussion, Dr. Chipman, Montreal, was glad that attention had been drawn to the early prognosis of cancer.

Dr. Cushing, Boston, also spoke.

Dr. J. Stewart, Halifax, emphasized the value of microscopic work in diagnosis.

Dr. Cullen, in replying, touched upon the subject that so many cases come to the notice of the general practitioner when it is too late. Further stated that there should be a pathological basis for the work.

Dr. Walker, St. John, moved a vote of thanks to Dr. Cullen for his able address.

In seconding the motion, Dr. McKeen, Glace Bay, said that one reason why so many cases do not present themselves to the medical profession is due to the fact that the magazines and papers are filled with advertising matter, which women take advantage of instead of consulting the physician. He felt that it is a matter for regret that many of the medical journals give space to the same kind of advertising matter.

THE X-RAYS IN DISEASES OF THE BONES.

Dr. Codman, of Boston, then followed with his paper, The Use of the X-Ray in the Surgery of Diseases of the Bones. He said that he had always been particular in the interpretation of the x-ray picture. He dealt with the subject under four heads: (1) Knowledge of the essentials of an x-ray picture. (2) The knowledge of the normal x-ray anatomy. (3) A knowledge of the pathology of different forms of bone diseases. (4) The ability to form diagnosis from the x-ray picture. This address was illustrated by blackboard drawings and a series of most interesting screen pictures from lantern slides, showing various phases of diseased bones. He considered the x-ray important in that it showed when to amputate.

EUROPEAN GYNAECOLOGY.

Dr. Chipman, Montreal, next read a paper on Some recent Developments in European Gynaecology. The first part gave an account and description of his impressions of the hospitals in Vienna, Berlin, London, Edinburgh, St. Thomas and Liverpool. The second part dealt with clinical and operative work. The doctor took up the method of extirpation of Uterine Cancer. He believed the right and proper treatment to be the removal of the organ. Then proceeded to give a report of the different methods employed in performing the operation. He considered the best method to be the abdominal instead of vaginal.

JULY 7TH—MORNING SESSION.

ELECTIONS AND BUSINESS.

The nominating committee reported as follows: President, S. R. Jenkins, M. D., Charlottetown, P. E. I.; Vice-Presidents, F. F. Kelly, M. D., Charlottetown, P. E. I.; G. DeWitt, M. D., Wolfville, N. S.; G. C. VanWart, M. D., Fredericton, N. B.; Secretary, T. D. Walker, M. D., St. John, N. B.; Treasurer, Huntley McDonald, M. D., Antigonish, N. S.; Local Committee, P. Conroy, M. D.; J. Warburton, M. D.; F. P. Taylor, M. D.; R. McNeil, M. D.; —. Dewar, M. D.; Local Secretary, H. D. Johnson, M. D.

Moved that the report be received and adopted.

ADDRESS IN MEDICINE.

Dr. W. F. Hamilton, of Montreal, then followed with the Address in Medicine which will appear in the CANADA LANCET. His remarks were based on his clinical experience in the hospital, with which he is connected.

In discussion, Dr. DeWitt said that one strong point of the paper was that it showed the difficulty of diagnosis; and it must be encouraging to some present to hear, from such a source, that many diseases are attended with difficulty of diagnosis. Cited the case of a lady, who had hemorrhage, presumably of the lungs. On examination, no lesion found, no cough, no sputum, but there would be at night a little hemorrhage and a bloody taste in the mouth in the morning. After several attacks, extending over three years, it was discovered that the cause was a varicose condition of the veins at the base of the tongue. After treatment for that trouble the patient is apparently now well, having had no recurrence of the hemorrhage for six months. He then moved a vote of thanks to Dr. Hamilton.

Dr. Goodwin, in seconding the motion, said that he considered it very fitting that Dr. Hamilton should read a paper before this Association, as he is a Maritime boy. He also thought that in the reading of this paper many would find themselves on more familiar ground, than in some others which had been delivered.

TUBERCULOSIS OF THE URINARY ORGANS.

Dr. Ernest W. Cushing, of Boston, followed with a paper, A case of Tuberculous Kidney and Ureter. Specimens were shown from the two cases cited. This paper to be published later.

Dr. J. Stewart spoke of the danger of affecting the bladder from the kidney, and also of the difficulty in distinguishing whether the disease is in the bladder or the kidney. Sometimes instead of scattered foci, the whole kidney seems converted into an abscess, and when the kidney is removed a layer of secretive substance is still left. When a large amount of secretive substance is left it is better perhaps to incise, drain and later remove the kidney. He moved a vote of thanks, which was seconded by Dr. McKeen, who agreed with what Dr. Cushing had said. Thought it better to take the chance and have the operation performed.

Dr. Walker referred to a case of tuberculous kidney in which Creasote had good effect, while Salol had no effect at all. Motion carried.

Dr. Cushing said, in reply, that in opening a tuberculous kidney there is always danger of infecting the wound, Better wait until compensation is established in the other kidney.

LEGISLATION RE BLINDNESS.

Dr. Kirkpatrick, Halifax, N S., then read a paper, "Legislation for the Prevention of Blindness." He asked that a resolution be passed by the Association and a committee appointed to deal with the matter.

Dr. Jones said legislation was passed in the matter of Ophthalmia. Dr. Kendall brought a Bill into the House of Assembly, which was passed. When it reached the Legislative Council, Dr. Parker considered that it was not workable in the way it was worded and it was thrown out. Suggested that, if a Bill be drawn up on the basis of the Maine Law, it might be passed.

Dr. Walker thought it a most important matter and, even if legislation could not be obtained, a great deal of good might be done, if the medical profession kept this matter always before them. He had found, in Maternity Hospital work, that the only kind of legislation that kept the disease down was Nitrate of Silver.

Dr. M. A. B. Smith spoke of a case in which he used 35 per cent. solution of Argyrol. Although a bad case, the child recovered. He then read the following resolution: *Resolved*, that this Association approves of an appeal to the Legislature of the Maritime Provinces seeking legislation for the prevention of blindness, such legislation to be along the lines of Dr. Kirkpatrick's paper. Resolution carried. The President then appointed the following committee: For Nova Scotia, Drs. Kirkpatrick and Huntley McDonald; for Prince Edward Island, Drs. Murphy and H. D. Johnson; for New Brunswick, Drs. Thos. Walker and J. R. McIntosh.

OPERATION FOR SLIPPING OF THE PATELLA.

Dr. R. A. H. Mackeen, Glace Bay, N.S., then followed with a paper, Goldthwaite's operation for the relief of recurrent slipping of the Patella with report of a case. This address was illustrated by a diagram. Said in closing, that he knew of no operation that was more successful than the one just described.

Dr. Walker complimented Dr. Mackeen on the interest and conciseness of his paper.

Dr. Stewart spoke of this operation having been performed at the smaller hospitals of Nova Scotia, St. Joseph's, Glace Bay, and the Aberdeen at New Glasgow.

Dr. M. A. B. Smith spoke of the use of steel appliances and reported a case where such treatment had been successfully used, in dislocation of the knee cap.

OBSTRUCTION OF THE OESOPHAGUS.

Dr. J. Stewart, Halifax, N.S., read a paper on Obstruction of the Oesophagus. His subject was illustrated by diagram. Prognosis should be guarded. Cited a case where a toothpick had been taken from the Oesophagus, after having been there for six years.

Dr. Atherton spoke of a case of stricture of the Oesophagus. The patient could not take any food or liquid except through a glass tube. Could not take a drink of water from a cup without regurgitation. The stomach was opened and a whalebone bougie inserted. For three cases of foreign bodies he performed Oesophagotomy. In some cases, in order to get a string down into the stomach, there is trouble as the patient cannot swallow and it is necessary to use a whalebone bougie.

Dr. Codman spoke of those with cancer, in which the question of relief is the important thing. Reported a recent case in his own practice. The chief difficulty was the desire for food and the inability to swallow it, the patient being hungry and trying to take food. After taking liquid

there was regurgitation. Finally the smallest possible tube was put down and the patient fed through that. He considered it unwise to pass bougies in malignant diseases. In the latter, there is often trouble in passing the ordinary straight bougie, as you are apt to miss the opening. It is necessary to use a Coudé curve. He spoke of foreign bodies in the bronchi in which, by performing tracheotomy and using a urethroscope, the foreign bodies can be picked out.

AFTERNOON SESSION.

CASE REPORTS.

The first paper was read by Dr. T. C. Watson, Halifax, N.S. He reported the following cases, interesting congenital tumor, and Graves' disease, an anomalous case.

In discussion, Dr. Doyle said that the chief point was the peculiarity of diagnosis in the second case. First thing in this disease is tachycardia, which is absent in Dr. Watson's case. Other symptoms can be explained as due to arterial sclerosis. The tremor may be due to the nephritis. We do not know what the normal prominence of his eyes were. There is nothing to point to diagnosis except the exophthalmos.

Dr. Walsh was called upon but did not wish to make any remarks upon the paper.

Dr. Watson, in reply, claimed that the absence of tachycardia is a rare occurrence, but that he had given reasons for it in his paper. The tremor and nervousness as due to arterio-sclerosis is not tenable. The cause of the disease is not any better understood than forty years ago.

CARBOLIC ACID POISONING.

Dr. W. E. Moore, Kentville, N.S., then followed with a paper, case of Carbolic Acid Poisoning. Treatment used was Jamaica rum and hypodermic injections of strychnine and atropine.

Dr. Goodwin said that alcohol seems to be the antidote for carbolic poisoning.

Dr. M. A. B. Smith reported a case where a woman had taken a tablespoonful of carbolic acid. She at once took a drink of milk but shortly became unconscious. The lips and mouth were burned and, when on attempting to pass a stomach tube he found such a resistance, due probably to stricture of the œsophagus, that it could not be done. then used a large rectal enema of sulphate of magnesia. In addition gave brandy and strychnine. After seven hours, the patient showed signs of returning consciousness. Thought that sulphate of magnesia ought not to be overlooked as an antidote.

Dr. Wetmore spoke of an old man, who swallowed one ounce of carbolic acid immediately after eating a hearty dinner, which had been of a fatty nature. Dissolved sulphate of magnesia and poured it down. Patient vomited freely and there was no bad effect except that he was burned. If the sulphate was of any value, in this case, it must have acted locally.

Dr. Armstrong reported the case of a woman who had been left alone in the house and was found unconscious, with a strong smell of acid prevailing. Thirty-five minutes after, on his arrival, found her in a state of coma. Could not get her to take any medicine, so poured some alcohol down, but did not think it reached the stomach. Also used hypodermic injections.

INSURANCE EXAMINATION FEES.

The Secretary read the following telegram, which had been received from E. A. Lawson, of the Confederation Life.

"Belated advice behalf of Life Officers' Association, asking me to represent its interests, if fee question raised. It being impossible to return to Halifax in time, would ask your Association, as act of courtesy, to desist in any action favoring a change until Life Officers' Association be given an opportunity to confer with a committee of men from different points at a convenient date."

Dr. Walker stated that, as the telegram had been received at a time when it could not be brought before the meeting and a reply was necessary, he had sent the following answer:

"Feeling strong, but in deference to request will try to defer action until next meeting, pending conference."

Dr. C. D. Murray did not think that the telegram sent implicated the Association at all.

Dr. Clay considered that the medical profession had been slaves to the public and thought that the matter should not be dropped until recognition had been granted to the same extent as is now given to the legal fraternity. Then moved the following resolution: "Resolved that this Maritime Medical Association desires to place on record its appreciation of the action taken by the Lunenburg Queens Medical Society in refusing to accept Insurance examination at a less figure than \$5.00, said action having been already endorsed by the Nova Scotia Medical Society.

"Further resolved that the Medical Societies of New Brunswick and Prince Edward Island be requested to take the matter into consideration, as well as the fees for attending on railway employees and other corporations and government services.

"Further resolved that the members of the profession throughout be urged to complete county society organizations, with a view to a still further betterment of our professional condition."

Dr. Reid did not recollect ever making a life insurance examination for less than \$5.00.

Dr. DeWitt asked the question, whether the resolution referred to the making out of death certificates as well as to insurance examination. Said that at one time he made out five certificates and charged \$12.00. The papers were sent to Halifax but returned by the executors, who said that he had made a mistake and charged too much, as a medical adviser in Halifax had said that \$1.00 each was enough.

Dr. Clay thought that the payment for certificates rested entirely in the hands of the parties receiving benefit from the insurance. He knew of a surgeon, at the Hospital, who had sent a bill for \$5.00 for one certificate and received it. Resolution carried.

TELEGRAMS.

Dr. G. M. Campbell moved that a telegram of congratulation be sent to the first President of this Association, Dr. Bayard of St. John, who had just passed his ninety-first birthday.

A telegram was received from Lieut. Skinner and Majors McLarren and Bridges, who are at camp in Sussex, regretting their absence from the meeting and wishing the Association every success.

NOVA SCOTIA HEALTH ACT.

Dr. A. P. Reid then read a paper on The Public Health Act in Nova Scotia.

In discussion, Dr. Clay said that Dr. Reid's paper was a very timely one. Health Acts are very difficult of enforcement in the rural districts. The difficulty exists principally in providing funds for the enforcement of the Act. Said that the committee, who had been appointed to interview the government, found them quite willing to do what they could and they had carried out the promises made. Having made a start in securing a fairly workable Health Act, he thought the good work had better be continued. Those who have trouble in enforcing the Act have only to call upon Dr. Reid, Provincial Health Officer, as he has power to force the local authorities to act.

Dr. DeWitt moved the following resolution: Resolved, that to carry out his duties, the Provincial Health Officer should make himself acquainted with the Municipal Councils and advise with them. He should see that the local Boards of Health are in working order and

properly organized. He should visit all the health officers, from time to time and see that they have a clear grasp of their duties. Should consult with the Inspectors of schools to the end that the hygienic requirements be complied with

Dr. DeWitt thought that the greatest harm in the country districts is from undrained soil and considered that a law ought to be passed, prohibiting a man from building a house on land, which had not been properly drained.

Dr. Armstrong seconded the resolution. In connection with the resolution Dr. L. M. Murray read Sections VI and IX of the Health Act. He also spoke of the salary of the Provincial Health Officer and thought if it was not sufficient to allow him to do his duty, it ought to be increased.

Dr. Cowie did not favor the idea of entering into any negotiations with the Provincial Government in regard to salary. Spoke of the duties of the Health Officer.

Dr. Reid said our business is not to dictate to the Government. The Act is general but does not cover details. The Health Officer should know all the Municipal Councils, Health Boards, as well as doing the duties spoken of in the Act. The resolution was purely suggestive, merely stating what the Association would expect the Officer to do.

Dr. Wetmore of Hampton, N. B., did not think much would be done by dealing with the Municipal Councils, but have good Health Boards. In New Brunswick the Government appointed a chairman in each district. The Municipal Council then appointed two others. If the Health Officer would communicate with the heads of the local Boards and try to enthuse them, more would be accomplished than by dealing with Municipal Councils.

Dr. Ross thought that the matter, under discussion, belonged to the Nova Scotia Society instead of the Maritime Medical Association, and it was so referred.

Votes of thanks were tendered to the railway and steamboat companies, to the *Maritime Medical News*, to the profession in Halifax for the manner in which the members had been entertained, and to the president and secretary for their efficient discharge of duty.

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EDITORIAL

PROFESSOR WILLIAM OSLER.

The news has just come that Prof. W. Osler, of Johns Hopkins University, Baltimore, has been appointed Regius Professor of Medicine in the University of Oxford, succeeding Sir John Burdon-Sanderson. His Majesty, King Edward, could not have approved of a more suitable selection for the vacant chair.

Dr. Osler has a reputation that is world wide. His work on the blood and blood diseases, his researches in pathology, his investigation on the plasmodium malarie, his numerous contributions to medical literature, his brilliant career as a lecturer, and his charming personality, have all tended to make him one of the best known and most highly respected of medical men in the British Empire. In 1883 he delivered the Goulstonian lectures, taking as his subject Ulcerative Endocarditis. He was President of the Canadian Medical Association in 1885. In 1887, he gave the Cartwright lectures at the College of Physicians and Surgeons, of New York. His practice of medicine is found in almost every doctor's library. The late Sir Grainger Stewart said at the Edinburgh meeting of the British Medical Association, that "before I address my class, I look up Osler to see what he has to say."

He commenced his medical studies in Toronto in 1868. While in Toronto, he formed the acquaintanceship of the late Dr. Bovell, who was an ardent student, and from whom Dr. Osler drew much of his love for medicine and his inspiration to achieve distinction. Leaving Toronto, he proceeded to McGill University, Montreal, from which he graduated in 1872.

For many years he was an esteemed teacher on the medical faculty of McGill, lecturing on Physiology, Pathology and Clinical Medicine. Much to the regret of the authorities of McGill University, he severed his connection with it in 1884 to accept the position of Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia, a position which he held for a number of years with marked credit to himself and satisfaction to the University.

In 1889, he was called to Baltimore to fill the high and responsible position of Physician-in-Chief to Johns Hopkins University. It is not

straining language to state that he had much to do with making the great reputation which this University has attained as a scientific centre. Without Osler, Johns Hopkins would have been something quite different to what it has been during the past many years

That he will shed lustre in the University of Oxford, there is no doubt. One could hardly imagine a field more suited to the tastes of Dr. Osler than the distinguished group of colleges in connection with that University and the medical college and hospital of that ancient city.

Dr. Osler has attained to a very high standing in the world of science and letters. He is a Fellow of the Royal College of Physicians, a Fellow of the Royal Society, an LL. D. of the Universities of Toronto, McGill, Yale, Aberdeen and Edinburgh, and a D. Sc. of the University of Oxford. In conferring the latter degree upon him a few days ago, the following words were used: "Among those who apply the results of modern science to the investigation of the causes and the cure of diseases, few have attained greater distinction than William Osler. By his professional teaching, first in Montreal and afterwards in Baltimore, by his writings, which deal partly with questions of abstract science and partly with questions concerning the practice of medicine, and by his skill as a physician, he has been for many years a leading exponent of the principle that the art of medicine should be based upon the most exact scientific knowledge of the day. For his work in exemplifying this principle, as well as for the merits of his contributions to science, he was elected a Fellow of the Royal Society. In him, also, we welcome a representative of one of those daughter states which are the pride of the Mother Country—the Dominion of Canada—and also of that great Republic of the West, whose people, bound to us by the closest ties of kinship, are also among our best friends."

We wish for Professor Osler many years of useful labors in his new field, and we sincerely trust that he may play no small part in the solution of the many burning problems now engaging the thought of the medical profession. When the final count is made, we hope that the words of Virgil may prove true of Osler: *Resum pars magna fuit*.

SENATOR SULLIVAN ON PATENT MEDICINES.

The thanks of the profession is due Hon. Senator Michael Sullivan M.D., of Kingston, for his action in the Senate of Canada on the question of patent medicines. On 5th August, 1894, he moved the following resolution:—

"That an humble Address be presented to His Excellency the Governor-General, praying that His Excellency will cause to be laid upon the Table of the Senate a statement showing the names of all liquid mixtures known as patent or proprietary medicines purporting to remove the most varied forms of diseases occurring in the human body, and, when weakened by such disease or by any indulgence, habit or accident, to restore it to its former strength and vigour. Showing also the amount of money, if any, paid by importer, maker, mixer or vendor, to the Government as special tax or license, and to whom paid. Showing likewise if the government has any knowledge of the ingredients which are employed to make these compounds :—

"(1) Has such knowledge been acquired from the statements of the parties who have the formulæ ?

"(2) Has it been acquired by qualitative or quantitative analysis of the Dominion Analyst, or by any other practical chemist, if so, what quantities are contained in a determinate measure, say one fluid ounce, of the following named ingredients :—

"(1) Water, quantity in determinate measure, say one fluid ounce, of the preparation examined.

"(2) Alcohol in any form, other than absolute ; methylated or proof spirit or any other form ; essences, ethers or any other solvent ; colouring or flavouring substances ; and, lastly, the solid ingredients in said preparations, the quantity and names of each."

In his speech the Hon. Senator Sullivan made a vigorous attack on the patent medicine business as a whole, but particularly on liquid mixtures on account of the large amount of alcohol which many of them contain, as well as dangerous drugs, such as opium, chloral, bromides, etc. He referred to the fact that many of these liquid mixtures contain large quantities of alcohol, in some instances as much as 40 per cent. He also pointed out the fact that the ingredients in these compounds were quite unimportant and could not accomplish the cures claimed for them.

In speaking of the testimonials he pointed out that these could easily be purchased. There were persons who could be induced to sell a testimonial for 25 cents. Many testimonials were also bogus. Indeed, it may safely be said that there are persons who pose as public men, ministers, doctors, lawyers, etc., who can be induced, for a fee, to give a certificate containing the most extravagant statement regarding the wonderful merits of certain patent medicines. When these testimonials are carefully examined they do not bear the convincing marks of truthfulness. There are ministers of the most nondescript denomina-

tions, and those who call themselves "doctor" and sign "M.D." to their names, who never were in a college nor passed a single examination. Testimonials have been purchased from prominent persons for which large sums were paid.

In any measure, or legal enactments, passed by the Government to regulate the sale of patent medicines, a few well recognized principles should be clearly set forth. The makers should be compelled to give the exact composition of the compound put on the market; all guarantees of cures should be strictly prohibited, as this is practically fraudulent; the publishing of abusive statements about physicians and surgeons should be stopped; the right reserved to examine testimonials for their genuineness; and authority to enquire into cases reported as cured.

To show the absurdity of some of these testimonials let us mention one. Some time ago we saw a recommendation of a certain medicine from a prominent clergyman; but the amusing part of the whole affair was that the name of the medicine was an absurdity and a chemical impossibility. The thing mentioned in the name could form no part of the compound. And yet the medicine was highly praised by a prominent clergyman!

QUACK ADVERTISEMENTS AND THE MAILS.

During the recent session of the House of Commons, Sir William Mulock introduced the following amendment to the Postal Act:—"It shall not be lawful to transmit by mail any books, magazines, periodicals, circulars, newspapers or other publications which contain advertisements representing marvellous, extravagant or grossly improbable cures, or curative or healing powers, by means of medicines, appliances or devices referred to in such advertisements." After some discussion, the amendment was agreed to; but, later on, was dropped for the present. During the discussion Sir William Mulock, the Postmaster General, said:—"It was necessary to put a stop to the methods of scoundrels who advertise marvellous cures and make fortunes out of the unfortunate sufferers. Only the other day one advertisement claiming supernatural powers and shocking in its nature was published. This method of making fortunes was one of the hugest frauds allowed by the law of the land."

We could point out some most scandalous instances of the most objectionable stuff being sent in great quantities by post. In one instance of recent date, a circular of the most filthy character came into our possession, dealing with the sexual functions, and containing

alarmist statements, calculated to frighten young men, and holding out to them the benefits of some wonderful cure. There are many serving in Kingston whose records are clean compared with such persons. We trust that at the next session a stringent amendment will be adopted, prohibiting the use of the mails for such literature. In the meantime, we hope Sir William Mulock will continue in his present laudable purpose.

AN OBJECT LESSON IN CHRISTIAN SCIENCE.

Some years ago Christian Science was introduced into this country from the United States. In Toronto, the followers of this belief have a church on Simcoe street, the late, Mr. J. H. Stewart having been an active spirit in it. He died on 9th August, after an illness of some months. He had received some injury, but how far it caused his illness we do not know. Here we have a leader of the Christian Science cult meeting with an accident, becoming ill, steadily growing worse, and finally dying.

Let us now quote a few passages from the writings governing the sect: "Have no fears that matter can ache, swell, and be inflamed, from a law of any kind, when it is self-evident that matter can have no pain or inflammation. Your body would suffer no more from tension or wounds, than the trunk of a tree you gash, or the electric wire which you stretch, were it not for mortal mind."

And again: "When an accident happens you think, or exclaim, 'I am hurt,' your thought is more powerful than your words, more powerful than the accident itself to make the injury real. Now reverse the process. Declare you are not hurt, and understand the reason why; and you will find the ensuing good results to be in exact proportion to your disbelief in physics, and your fidelity to God." Once more, "You say that accidents, injuries and disease kill man; but this is not true. The life of man is mind. The material body manifests only what mortal mind admits, whether it be a broken bone, disease or sin."

In the case of the late Mr. Stewart, a leader of the Christian Scientists, several interesting questions arise. Is the entire Christian Science practice a failure? Or did Mr. Stewart lack faith in what he taught to others? Or why did his mortal mind admit disease to be present in his body? Or did he die without disease but as the result of an admission of his mortal mind? If he died as the result of disease, then, according to his own teaching, it could only be in his body as an admission of his own mind. But why did he admit the presence of any

infirmity? "Sin, sickness and death should cease through Christian Science." In Mr. Stewart's case disease did not cease. He was either unable to check the disease, or he "admitted" by his "mortal mind" that there was disease and died from the effects of a notion or erroneous thought, which a leader of the sect should have been able to correct.

In the illness and death of the late Mr. Stewart, a prominent leader of the Toronto Christian Scientists, we are furnished with an excellent example of the futility of their teachings. In the case of children, we are told, "until the advancing age admits the efficacy and supremacy of mind, it is better to leave the adjustment of broken bones and dislocations to the fingers of a surgeon." In the case of Mr. Stewart, "advancing years" had not attained to the requisite "efficacy and supremacy of mind" to "confine itself to mental reconstruction and the prevention of protracted confinement."

We are told: "While the spell of belief remains unbroken, sin, sickness and death will seem real until the science of man's unbroken harmony breaks the illusion with its own unbroken reality." So, in the case of the late Mr. Stewart, "the spell of belief remained" and his "sickness and death" was real. He did not attain to "the science of man's unbroken harmony," and therefore the "illusion" was an "unbroken reality."

According to Christian Science, everything is the result of thought. Strychnine gets its poisonous properties in this way. When a person swallows strychnine, not knowing what was taken, it exerts its harmful influence because people believe it is a poison. Thus it may be that this majority opinion that injuries injure and diseases cause death led to Stewart's death. If this be so, his death was due to the thought of others. Here we reach a *reductio ad absurdum*. "Arnica, quinine, opium, could not produce the effects ascribed to them except by imputed virtue. Men think they will act thus on the physical system, and consequently they do. The property of alcohol is to intoxicate; but if the common thought had endowed it with a nourishing quality like milk, it would produce a similar effect."

And likewise common thought has endowed injuries and diseases with evil qualities; and, despite the thought of a Christian Scientist, in conformity with this common thought, these agencies keep on taking life, even that of a leader among them.

The Rev. Andrew F. Underhill very aptly puts the case in the following words: "The Christian Scientist will beg the question in the case of a fatality, by simply saying that the thought of the injured

person was in some way defective, and therefore no cure could ensue." This would be a harsh indictment in the case of the late Mr. Stewart. And yet it comes from Christian Science teachings! Towards his end he received what relief a regular physician could afford him.

THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

For many years the books belonging to this association have been housed in very inadequate space in the building owned by the College of Physicians and Surgeons of Ontario. It has always been felt that some better accommodation should be secured, if the library was ever to become popular and receive general support from the members of the medical profession throughout the Province of Ontario. The conditions under which the Library Association has been laboring were so unfavorable that the funds were reduced to a very low ebb, and the affairs of the Association reached an acute phase.

It was felt that the time had come when an effort should be put forth to place the Ontario Library Association on a sound footing. Drs. Ross, Reeve, Powell, McPhedran, Bruce, and several others took the matter in hand. As a result of these efforts a sufficient amount of money has been secured to enable the committee to purchase the Thorne residence, No. 9, on the east side of Queen's Park. No more desirable spot could have been secured. It is close to an excellent street car service, and is just far enough removed from the main thoroughfare to be enjoyably quiet. The grounds are ample and permit of future extension of the present building should such ever be required. It is a perfectly home-like spot, free from noise and dust, and with an ample supply of light and air, as the adjacent buildings do not crowd in upon it. The building will soon be fitted up suitably for the books and for the holding of meetings. We hope the time is not far distant when all will be able to say in the words of Horace: *Ille terrarum mihi praeter omnes angulus ridet.*

The doctors have done well in this matter and subscribed generously towards the funds required to make the purchase and put the building in fit condition for the objects of the association. Among the larger donations may be mentioned, \$5,000, from the Massey estate; \$500 from Mr. George Gooderham; \$500, from Mr. E. B. Osler, M.P.; \$500 from Mr. T. Eaton; \$3,000 from members of the profession; and \$500, from Professor W. Osler. We understand that the property can be paid for and remodelled, leaving a good balance on hand.

There is much yet to be done. Now that there is a suitable home for the books and a collection of about 10,000 volumes for it, every doctor can do something to add to the usefulness of the Library. There is not a doctor in the province who does not have books he could give away, or journals, bound or unbound. Donations of these would always be gladly accepted. It should be the ambition of the profession of this Province to have in their Library practically every book on any medical subject. This is saying a good deal, but it is not saying what is impossible.

Another thing that doctors might do in many instances, namely bequeath their collection of books and journals to the Library. It might be that there would be many instances of duplication of books, but these can be exchanged with other Libraries for duplicates which they may possess.

Many persons will not give money to current expenses, who would readily give toward the foundation of an endowment fund. We would suggest that such a fund be opened, having no fear but that it will steadily grow. The various medical societies throughout the Province would do well to take an interest in the Library, as much could be done by them both in the way of getting donations of books and money.

We wish to draw the attention of those wishing medical practices or opportunities to the splendid list offered by Dr. Hamill, who conducts the Medical Exchange. See his list among our advertising pages.

The Doctors of Albion, Mich., have formed a combination not to attend dead beats. A list of these will be prepared.

OBITUARY.

J. H. McKAY, M.D.

Dr. John H. McKay, of Truro, N.S., died there 3rd August. Deceased was very well known throughout the Province, and was the son of Wm. McKay, one of the pioneer hotel men of Truro, and brother of Senator McKay. He was 57 years of age, and leaves a widow and family.

ROBERT M. KIPPEN, M.D.

The funeral of the late Dr. Robert Macdonald Kippen took place 18th July, from the residence of his father, 82 Byron avenue, London, to Mount Pleasant Cemetery, and was largely attended. The services

at the house were conducted by the Rev. J. G. Stuart, pastor of Knox Church. The pall-bearers were all physicians of this city. They were Drs. George Clark, David Arnott and Ernest Williams, all of whom were members of the deceased's graduating class; W. J. Tillmann, A. V. Becher and J. J. Mason, who were students of the Medical College at that time. Some beautiful floral wreaths were laid on the bier by friends, and many telegrams of condolence were received by the bereaved family. There were a large number of relatives and friends in attendance from Stratford, Woodstock, Embro, St. Thomas and other places.

BOOK REVIEWS.

DISEASES OF THE EAR.

A Text Book for Practitioners and Students of Medicine by Edward Bradford Dench, Ph.D., M.D., Professor of Diseases of the Ear in the University and Bellevue Hospital Medical College; Aural Surgeon, New York Eye and Ear Infirmary; Consulting Otologist to St. Luke's Hospital; Consulting Otologist to the New York Orthopædic Dispensary and Hospital; Fellow of the American Otological Society; of the New York Academy of Medicine; of the New York Otological Society; of the New York County Medical Society. With 15 plates and 158 illustrations in the text. Third edition, revised and enlarged. New York and London: D. Appleton and Company.

The third edition of this work on otology is considerably better than the previous editions. This is doubtless due to the greater care on the author's part to write fuller and clearer on the operative treatment of chronic suppurative otitis media, and of the various intra cranial complications of middle ear suppurations. In cases of acute middle ear suppurations, Dench is a firm advocate of early operation on the mastoid rather than re-opening the drum head. He says, page 354, "Where the drum head has been once thoroughly incised, and on a later date symptoms of incomplete drainage make their appearance, it is better to open the mastoid at once and to secure free drainage posteriorly than to temporize by resorting to a second myringotomy." While this may suit many cases, it will certainly result in a large number of mastoid operations which might very easily have been avoided. In the treatment of chronic catarrhal otitis media he does not think it advisable to remove small pads of adenoid tissue in people over 30 years of age unless it gives rise to some special disturbance, while in young subjects he advocates operative measures on the *absorption* treatment. This absorption treatment consists in the post-nasal application of silver nitrate, grains 60 to the ounce. Cases of naso-pharyngitis or acute adenoiditis will doubtless be relieved by this agent, but more pleasantly, however, by argyrol. That it is ever desirable to take this very slow

and most uncertain method to remove adenoids the reviewer seriously questions.

Fig. 156, showing the lateral aspect of the skull, with markings denoting the various landmarks for operative purposes, is very clear and of great value to any one about to open the skull. Two coloured plates show very nicely the anatomy of the lateral sinus and jugular vein.

PRACTICAL APPLICATION OF RONTGEN RAYS IN THERAPEUTICS AND DIAGNOSIS.

By William Allen Pusey, A.M., M.D., Professor of Dermatology in the University of Illinois; and Eugene W. Caldwell, B.S., Director of Edward N. Gibbs Memorial X-Ray Laboratory of the University and Bellevue Medical College, New York. Second edition, thoroughly revised and enlarged. Handsome octavo volume of 690 pages, with 195 illustrations, including 4 colored plates. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Cloth, \$5.00 net; Sheep or Half Morocco, \$6.00 net. Canadian Agents: J. A. Carveth & Co., 434 Yonge Street, Toronto, Ont.

This excellent work has attained the distinction of two large editions in one year—a proof not only that such a work was needed, but also of the book's practical value. The vast amount of literature accumulated during the past year has been very carefully digested, and the latest knowledge and advancements incorporated. A practical feature of the work lies in the fact that nearly all the illustrations represent actual clinical subjects, showing the benefits of the x-rays at the various stages of their application. The chapters by Caldwell give full details regarding the use and management of the apparatus, the text being fully illustrated with many photographs and drawings, including four full-page colored plates. The second edition has been brought strictly down to date, especially the case histories cited; and by the addition of much new matter, and a number of new illustrations, the usefulness of the work has been greatly extended. It is one of the latest and one of the best books on the subject.

ESSENTIALS OF PELVIC DIAGNOSIS.

By E. Stanmore Bishop, F.R.C.S., Eng., Author of "Uterine Fibromyomata, their Pathology, Diagnosis and Treatment." Hon. Surgeon Ancoats Hospital, Manchester; Vice-President British Gynæcological Society, London; Ex-President Clinical Society, Manchester, etc.

Stanmore Bishop's standard treatise on "Uterine Fibromyomata" has already attracted wide attention; and his "Pelvic Diagnosis" promises, through its scholarly treatment of the subject, to attract the notice and claim the interest of many a practitioner. The chapter on "Pain as a factor in Diagnosis" is the best we have yet seen on the subject.

It is complete, clear and plain, and fairly bristles with points of practical value, and will be welcomed not only by surgeons, but by those whose duty it is to advise patients as to their future course.

The special manner in which a case to be diagnosed is traced through by the "Lines of Diagnosis" or the "Diagnostic Tables" is at once unique, interesting and highly satisfactory. Mr. Stanmore Bishop has given us a work which will certainly fill a long felt want, and one that should be in the hands of every surgeon, whether general or special, and to the younger members of the profession, and to those of limited experience, it will prove an invaluable help and guide. We confidently bespeak for it a prominent place in the working library of our busy men.

INTERNATIONAL CLINICS.

A quarterly of illustrated clinical lectures and especially prepared original articles, on Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynaecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other topics of interest to Students and Practitioners. Edited by A. O. J. Kelly A.M., M.D. Philadelphia U. S. Vol. II. Fourteenth series, 1914 Philadelphia: J. B. Lippincott Company; Montreal: Charles Roberts, Ontario St. Price \$2.25.

What we have said of previous numbers of this issue can be said of this one. The contributors are all of the very highest standing. The variety of subjects covered by the articles is of an interesting nature. Special attention is paid to diseases of warm climates. There are a number of articles on Surgery, Medicine, Pediatrics and Rhinology. The volume is well illustrated. This is an excellent volume of an excellent series.

A TEXT-BOOK OF PATHOLOGY.

By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia; Pathologist to the Medico-Chirurgical Hospital, Philadelphia. Handsome octavo volume of 818 pages, with 350 illustrations, a number in colours. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Cloth, \$5.00 net; Sheep or Half Morocco, \$6.00 net. Canadian Agents: J. A. Carveth & Co., 434 Yonge Street, Toronto, Ont.

It was with anticipations of much pleasure and interest that the reviewer began reading Dr. McFarland's work on Pathology, and he can truthfully say that his greatest expectations were more than fulfilled. The book is excellent—excellent as regards both text and illustrations. Of the latter there are a number of beautiful ones in colors, printed directly in the text. Dr. McFarland's thirteen years' experience as a teacher of this subject, besides his extensive personal research in the laboratory, has fitted him most admirably to write a text-book on pathology, and this superb forelying work is all that any one—student or practitioner—could desire. Unlike most works on pathology, the subject is treated, not from the professor's point of view, but from that

of the student, the many difficult theories of the science being explained in clear, concise language. Quite a few works on pathology have come to the reviewer's desk within the last few years, but none has reached the standard of excellence held by Dr. McFarland's work.

DISEASES OF THE NOSE AND THROAT.

By D. Braden Kyle, M. D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia; Consulting Laryngologist, Rhinologist and Otologist, St. Agnes' Hospital. Third edition, thoroughly revised and enlarged. Octavo volume of 669 pages, with 175 illustrations, and 6 chromo lithographic plates. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

In presenting to the profession the third edition of this work the general plan of the previous editions has not been materially altered. The entire book has been carefully revised and such additions have been made as were rendered necessary by recent medical progress. The most important alterations and additions have been made in the chapters on Keratosis, Epidemic Influenza, Gersuny's Paraffine Method for the correction of Nasal Deformities, and in the one on the x-rays in the treatment of Carcinoma. The etiology and treatment of Hay Fever have been partially rewritten and much enlarged, as has also the operative treatment of Deformities of the Nasal Septum. In the chapter devoted to general considerations of Mucous Membranes and Hay Fever the author records the results of his experience in the chemistry of the saliva and nasal secretions in relation to diagnosis and treatment. The literature has been carefully reviewed, and a number of new illustrations added, thus bringing the work absolutely down to date.

CORRESPONDENCE.

DR. ROSWELL PARK'S STATEMENT *RE* CANCER.

Editor CANADA LANCET.

In your issue of August, Dr. Roswell Park calls attention to my quotation from the *British Medical Journal*, Jan. 16th, 1904, on the subject of cancer, in a recent address to the Ottawa Medical Society, which reads as follows, "that there is not a practising physician in the United States, who has anything more than a rudimentary knowledge of the subject." The complete sentence is, "In regard to Protozoa in relation to cancer, there is not a practising physician in the United States who has anything more than a rudimentary knowledge of the subject." Trusting this correction will place matters in the proper light, and prove entirely satisfactory to the profession, in which Dr. Park justly occupies a distinguished position.

Ottawa, Aug. 12, 1904.

Yours, etc.,
J. A. GRANT.



DR. GEORGE ELLIOTT, TORONTO,
General Secretary Canadian Medical Association.



DR. H. B. SMALL, OTTAWA,
Treasurer Canadian Medical Association.



DR. C. J. FAGAN, VICTORIA, B.C.
Secretary Provincial Board of Health, B.C.

DR. A. P. PROCTOR, KAMLOOPS, B.C.
Member of Executive Council Canadian
Medical Association.

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PRESIDENTIAL ADDRESS, CANADIAN MEDICAL ASSOCIATION. 24TH AUGUST.

By SIMON J. TUNSTALL, B.A., M.D., Vancouver.

MR. Chairman and Gentlemen,—I feel that my first duty to-night is to offer you my very hearty thanks for the honor you have conferred upon me in electing me President of the Association for the ensuing year.

When I recall the names of those who have preceded me in this chair, I can only ask your indulgence for the deficiencies you may find in me, of which I am very conscious, and express the hope that under my presidency the interests of the Association may in no wise suffer nor its honor be in any way tarnished.

The present occasion is no ordinary one. In the appointment of a President from among the members of the Association whose home and work lie in this far distant portion of the Dominion, and in our meeting here to-day at the Doorway of the West, a new departure has been made.

I am far too modest to suppose for an instant that any particular merit of mine has induced the Association to make this departure: rather I conceive it to be due to a general recognition of the claims and standing of the western members as a whole, and of the growing importance of this fair Western Province.

I should be performing my duties but poorly did I not seize this opportunity to thank you on behalf of my western confreres, and on behalf of the people of this Province in general, and of this city in particular for the compliment you have paid us in selecting this Province and this city as the place of meeting for this year, and I feel I am only expressing their wishes in tendering you a hearty western welcome to our midst, and their hopes that your brief stay among us will be both pleasant and profitable to you all.

To many of you, probably to most of you, the rapid progress and general development of this young Province will come as a surprise. It does to most of our visitors from the older parts of the Dominion.

who know how recent has been the settlement of the West. And certainly, looking round one, it does seem scarcely realizable that the site of this rapidly expanding city, of which its citizens are so justly proud, and the very spot on which this building stands, surrounded by so many comforts and refinements of modern life, was, less than two decades ago, a wild and almost impenetrable virgin forest, the haunts of the bear, the deer and the primitive savage.

It is less than a score of years by two that the incorporation of this city took place, and yet to-day it will compare favorably with many cities of the older Provinces twice and thrice its age. From the medical standpoint it is reaching after a high ideal.

Steel conduits, from the bosom of the mountains to the north ; the sewerage system, with its septic tanks, that deliver their effluent into tidal waters ; the paved streets, with their array of cleaners ; the cement sidewalks which are now throughout the city, rapidly replacing the earlier and cruder planking ; the public and private hospitals ; the General Hospital, which is now being built, and which, when finished, will be the peer of any hospital of its size, all make it clear that we are endeavoring to keep abreast of the times, as well in sanitary as in other matters.

It is no idle boast, then, if I say that in the West events move rapidly. Time is no sluggard here, and we see history fashioning itself before our eyes. The whole of this great Province was in undisputed possession of savage aborigines a half century ago. The closing years of the first half of the nineteenth century saw the first real settlement made on Vancouver Island, at a place called Camosum, in the native tongue, now Victoria, the capital of the Province.

A few years later, in 1858, an Act was passed in the Home Parliament to provide for the government of this new colony, thereafter to be known as British Columbia. From this date the real settlement of the Province begins. The discovery of gold in the Fraser and Cariboo soon made these districts as famous and as widely known as Sacramento or Ballarat and a great inrush of population was the result. But a very few years later the conception of that colossal and momentous undertaking, the building of the Canadian Pacific Railway, began to shape itself in men's minds, and was finally carried out. You are all, doubtless, familiar with the history of this great undertaking and know the almost insuperable difficulties its earlier promoters had to contend with and how in the end, in spite of political, natural and every other obstacle and hindrance, they successfully carried through the scheme and made possible the union of British Columbia and the great North-West with the rest of Canada, and gave us as a result that splendid heritage, that united land which stretches from ocean to ocean, from the rising of the

sun to the going down thereof—a land of which all her sons and daughters are so proud—our beloved Canada.

It is gratifying to the profession to know that it has been ably and honorably represented among those history-makers in the persons of Drs. Helmcken and Tolmie, who were the first medical men to settle in the colony, about the middle of the last century. Both took prominent parts in the earlier events of the Province. The former still remains with us ; the latter has gone to his rest. Prior to their advent the native Medicine-man had it all his own way.

There is a significance, not without interest to my mind, in the fact that this Association, representing as it does to-day in its various members the highest medical knowledge of this enlightened part of the world's history, should meet here in this new country, where Shamanism, or the cult of the savage Medicine-man, so recently prevailed, and does to some extent still prevail. The old and the new order of things are thus brought into suggestive contrast and juxtaposition, and we are led naturally to reflect upon the stages and steps we have passed since the days when all medical knowledge was comprised in the superstitious and rude practices of our savage prototypes ; and in spite of our sometime failures and our lack of knowledge, still in certain directions the reflection on the whole is a pleasant and gratifying one, both to ourselves and humanity at large. It certainly would not be the least interesting of subjects were I to attempt on this occasion a general survey of the march and progress of medical science from the days and practices of the primitive Medicine-man as we find him even in this Province, down to the times and discoveries of Lister, Pasteur, Virchow and their followers.

But it is not my intention to undertake such a task to-night, interesting and appropriate as it might under the circumstances be, although I cannot leave the subject without calling your attention briefly to a fact of which all of you may not be aware, and which gives pertinence to my reference to the old-time Shaman or Medicine-man. We are all familiar with hypnotism, but there are few of us, perhaps, aware that in the employment of hypnotism as a therapeutic agent we are returning to primitive methods, to the practice of our savage prototypes. Those who have made special study of the practices and customs of savage races inform us that the primitive doctor, or Medicine-man, was not that self-conscious fraud and humbug, knowingly duping his credulous patients, he is thought to have been, but a person who had a real belief in his own powers and cures ; and that those powers and cures were, when genuine, generally, if not always, attributable to hypnotism, especially to that phase of it known as suggestion. A state of hypnosis

was induced in his patient by the monotonous droning of his medicine song and the noise of his rattle, and when in this condition his attempt to extract the spirit of the disease from the patient's body, and his statement that he had presently accomplished it, acted suggestively upon the imagination of the patient and effected the cure. "Extremes meet," and "there is nothing new under the sun," we are told, and the school of Nancy, which is founded upon the suggestive phase of hypnotism, is not a new practice, but an unconscious return, or rather I should say it is an unconscious modification and extension of these primitive methods which were in vogue among our savages here up to a few years ago, and may be to this day, for aught I know to the contrary.

But enough on this head. It is my intention rather to bespeak your consideration to-night of a point or two which I, in common with many of the members of the profession, have very much at heart, and which I deem of such importance as to merit our most careful consideration and endorsement.

I have reference, in particular, to : 1. The Canadian Medical Protective Association. 2. The Federal Health Bill. 3. The Dominion Medical Council. 4. The treatment of Inebriates.

With regard to the first, The Canadian Medical Protective Association, I would desire to urge upon members the strong claims this Association has upon the profession. I am among those who believe in the need of such an Association, and that it may be made a valuable means of assisting and protecting members of our profession from wrongful actions-at-law, to which we are all of us at all times liable ; actions brought by irresponsible persons for alleged malpractice, or by unscrupulous persons for the purpose of obtaining money under threats of injury to our professional character.

It is well known that a medical man's professional prospects depend to a very large extent, if not entirely, upon his professional reputation, and it is not difficult, therefore, for unprincipled persons to attempt to levy blackmail upon him by threatening to bring action against him for malpractice or professional incapacity, which action, though wholly groundless and undeserved, may have the most disastrous effects upon his career and pocket.

During the past two years the Association has fought out several such cases successfully, and has amply demonstrated its usefulness and justified its existence. It is therefore, a matter of wonderment to many of us that the Association has thus far received so little encouragement or support from the profession as a whole. Out of a possible 5,500, the total membership last year was only 252. This is altogether too small a number to make the aims and work of the Association effective or sus-

tain it in a solvent condition, and I welcome this opportunity to invite your earnest co-operation in enlarging its membership and strengthening the hands of the Executive, and would to this end suggest that a special committee be struck during the Convention for the purpose of considering how best to enlist the sympathies and support of our brethren who are not yet members. I cannot but think that a large increase in the membership must inevitably result if the aims of the Association be once rightly understood.

The objects of the Association are such as all can subscribe to. It is not intended to defend or assist in defending unworthy members, or those who are actually guilty of malpractice, or who have brought discredit upon the profession. It aims rather to assist the worthy, those of its members who are wrongfully charged and whose character and reputation are placed at stake ; and also to deter irresponsible and unscrupulous persons from bringing action against members of the profession for the purpose of spiting or injuring them, or of exacting a bribe for their silence ; and it is only by uniting ourselves together in such a way as this Association offers that we can hope to secure the support of our brethren and become immune to many attacks which would otherwise be made upon us.

I feel, therefore, that we have but to devise some plan of arousing the interest of our brethren in the matter to ensure their support and co-operation.

And now a word or two as to the Federal Health Bill. Thanks to the energetic efforts of the special committee appointed to attend to this matter considerable progress has been made towards the attainment of our desires on this behalf. The interest and sympathy of the Minister of the Crown have been secured, and the Minister of Agriculture, the Hon. Mr. Fisher, under whose department the matter more directly falls, has taken the matter up most courteously and is thoroughly alive to its urgency and need. For the information of those not familiar with this subject, I would briefly say that the Association, at its meeting in Montreal in 1902, placed itself on record by resolution to the effect that it is expedient that a Department of Public Health be created by the Dominion Government and administered under the authority of one of the existing Ministers of the Crown, thus bringing all general questions relating to sanitary science and public health under one central authority to be known as the Public Health Department. There is no need for me to dwell upon the importance or desirability of this step ; it must commend itself to every member of the profession.

Thus far the Government has not seen its way clear to grant the desired measure. The work is not yet accomplished, and the need of

pushing the matter still exists. I sincerely hope the meeting will not dissolve without first passing a strong resolution in favor of the measure, and thus encourage and strengthen the hands of the committee who have this work in hand.

And now I desire to touch upon my third point, which I regard as of the highest importance. I refer here to the Dominion of Canada Medical Act, which was assented to in the Federal House in 1902. We are under a deep debt of gratitude to the members of the special committee, and especially to Dr. T. G. Roddick, for his untiring efforts to get this measure placed upon the statutes of the country, and it is with great regret that I notice so much misapprehension as to the scope and powers of this Bill still exists in certain quarters. It has been thought that it would encroach upon the rights and privileges of the different Provincial Medical Boards and interfere with their autonomy, and I gladly hail this opportunity to say a few words which may help to remove this misapprehension. It was, and is, not in any way intended to interfere with existing provincial rights or intrench upon the prerogatives of Provincial Medical Boards. As an instance, in my own native Province, Quebec, our French-speaking brethren will have the right of examination in their own language.

Provincial registration and Provincial Boards will still continue to exist, and each Province will be at liberty to fix whatever standard it pleases for its own practitioners. They can, where they wish, continue as examining boards with power to grant provincial licenses, as they do now, and in any case in their hands will be left all matters relating to taxation and professional discipline.

The Bill is a purely permissive one, and, though it has been placed upon the statutes of the country, it will be necessary, before it can become operative, to have the consent and co-operation of all the Provincial Medical Boards. Each Provincial Board will have to seek a slight amendment to its present Medical Act. This is all that is now required to make this more desirable measure effective, and I sincerely trust that this consent and co-operation will not be long wanting, for the aims and scope of this Act are such as should commend themselves to every member of the profession. Briefly, I would say that the main purpose of this Bill is to establish a Central Medical Council of Canada, with power to examine candidates and grant licenses, the possession of which shall ensure to the holders thereof such a medical status as will enable them to practise not only in all parts of the Dominion, but in the United Kingdom as well, or, indeed, in any portion of His Majesty's Empire. In short, to do away with those mortifying disabilities under which a medicinal man trained in Canada now labors, and put him upon a foot-

ing of professional equality with his brethren in other parts of the Empire. This is assuredly a laudable and most desirable object, and one which, in my humble opinion, should call forth the best efforts of each one of us to bring about its accomplishment ; and I sincerely trust that some concerted action will be taken in this matter before the meeting closes.

It is the least, I think, we can do to show our appreciation of the strenuous efforts exerted in securing the passage of so important a measure.

This brings me to my fourth and last point, "The Treatment of Inebriates." A conviction has been steadily growing in the minds of most medical men of late years that something should be done for the care and control of dipsomaniacs and inebriates in the form of founding establishments combining the main features of a hospital and an insane asylum, where drunkards could be legally confined under medical authority and treated in a systematic and enlightened manner. The practice, hitherto, of treating them as criminals subject to a fine or short periods of confinement in the common prisons of the country, has been shown to be wholly unsatisfactory and often productive of the greatest evil to themselves and those who may be dependent upon them.

There can be no doubt, I think, that the care and treatment of those unfortunate members of society is a question of the gravest and most vital importance, and should command the interest and attention of medical men as a subject, which, coming well within their province, affects so seriously the general commonwealth.

A movement towards this end has already been taken in Ontario, and a Bill drafted, the principles of which have received the endorsement of the Toronto Medical Society, and also of our own Association ; but what we want is a Dominion Act affecting the whole country ; and it would be the source of the greatest satisfaction to me if this meeting would take this question up seriously and nominate a committee to draft a measure that could be submitted to the Federal authorities. This could be done either on the lines of the Ontario Bill or any others that might commend themselves.

Speaking, personally, I may say that I shall be only too glad to help in drafting such a measure and giving any other assistance in my power, for I am convinced that the adoption and carrying out of the provisions of a bill of this kind will do much to diminish the volume of sickness, pauperism, vice and crime that now stains the annals of our country and restore to lives of usefulness and self-respect many of those poor-unfortunates whom it is the design of such a measure to control and help.

Before closing my address, I wish to express to our visiting brethren my appreciation of the kindly feeling and interest which have actuated them in taking part in the deliberations of our National Association, and to hope that their stay may be fruitful of pleasant reminiscences.

And now, gentlemen, I must thank you for your kind reception of me as your President this year, and for the patient and courteous hearing you have given to my remarks, and trust that the suggestions I have ventured to offer may meet with your approval and receive your support.

FUNCTIONAL HEART MURMURS; THEIR CAUSATION * AND DIAGNOSIS.

By ROBERT DAWSON RUDOLF, M.D. (EDIN.), M. B. C. P.
Associate Professor of Medicine in Toronto University,

EVER since auscultation of the heart was practised it has been known that heart murmurs frequently occur, which are not dependent upon any organic disease of the cardiac valves. Laennec, the father of auscultation, described these murmurs as follows: "I have known a considerable number of persons to die of different diseases, acute and chronic, who have presented the "bellows" murmur very distinctly during life, sometimes during several months, as well in the heart as in different arteries, and upon examination of their bodies I could discover no organic lesion coinciding constantly with the phenomena, which are not constantly met with in subjects who had never exhibited anything of the kind during life."

Since that time these murmurs have been the object of much investigation, and everyone practically agrees as to their frequent occurrence; but, nevertheless, they are often apt to lead to mistakes involving great hardship to individuals who may thus be prevented from entering the services or from insuring their lives, or may be forced to live a restricted and semi-invalid life with the dread belief always present that they are suffering from heart disease.

Sir William Broadbent in an address delivered before the Northwest London Clinical Society on October 20th, 1897, *Lancet*, Nov. 13th, 1897, alluded to this point and said that young men are sometimes rejected on totally inadequate medical grounds, after having obtained a place on the list at Woolwich or Sandhurst. He describes this class of cases so clearly that I give his description *in extenso*: "The candidate has usually been spending long and late hours in study with restricted exercise and limited fresh air and with possibly unlimited tobacco. He presents himself for medical examination in a state of extreme nervous excitement.

* Read at the meeting of the Ontario Medical Association, 17th June, 1904.

His pulse is rapid and perhaps irregular, his cardiac impulse violent, and may be diffused even beyond the right sternal border. Murmurs may be heard at one or more orifices * * * * * It would take a great deal to make me reject the captain of a foot-ball team of a large school * * * * * I have known such bruits to be looked upon as indicative of valvular disease requiring treatment by digitalis and demanding all sorts of precautions in the matter of exercise." All of us have seen examples of this class. But these murmurs may also occur in the apparently healthy, who have not been undergoing any debilitating process such as students do on the eve of examinations. Thus last week I saw the following case :—

CASE 1.—A young man of healthy appearance and good build complained of palpitation on emotion but not on exertion. He was a civil engineer and lived a typically healthy, out-of-door life and neither drank nor smoked. The condition had troubled him more or less since he first entered the University several years ago. As a student he was a good boxer and could stand a great deal of knocking about without distress; but, while waiting to begin a boxing match, or in fact any physical or mental test, he was much troubled with palpitation which, however, always wore off as soon as he got well into the struggle. In the neck a well marked bruit du diable was present. The pulse was 120, but usually about 80, and varied greatly with posture. He noted this point himself and found that his pulse was 70 while lying down and 96 when standing. In the standing posture no murmur was present, but if he lay down a well marked systolic one was audible in the second and third left intercostal spaces. He was not anaemic.

One might describe such cases almost to any number but such would serve no purpose. The subject may perhaps be best dealt with from three points of view : first, a description of the murmurs which occur ; second, a short summary of the views held as to the physical causes of these murmurs ; and third, the diagnosis.

(1) *Description*.—Inorganic or functional murmurs may occur in any of the cardiac areas, but by far the most common position is from the second to the third left intercostal spaces close to the sternum or a little external to it. While heard loudest at this point, these murmurs may be heard over most of the precordium, as far down as the apex and even to the right of the sternum. In an individual having such a murmur there will usually be present also a bruit du diable in the veins at the root of the neck, and also murmurs in the large arteries, but with these vascular murmurs we are not now concerned. There is early and marked accentuation of the pulmonary second sound and such accentuation usually precedes the murmur.

In a well marked case one may sometimes detect four distinct systolic murmurs over the precordium, one at each of the four cardiac areas. Functional cardiac murmurs are always systolic in time and the importance of this point can scarcely be over-estimated. In spite of an occasional statement found in literature to the contrary, it is extremely unlikely that a murmur occurring in any part of the cardiac cycle other than that occupied by the ventricular systole is of a functional nature, and the few cases placed on record in which diastolic murmurs are explained as functional must be considered as open to doubt. Functional murmurs accompany rather than replace the first sound of the heart and vary from mere impurities of that sound up to a loud, rasping bruits; but, as a rule, they are of a soft, blowing nature. The ones occurring away from the base of the heart may be distinctly post systolic in time, that is they occur during the short pause of the heart when the ventricle is still contracting, but the first sound has ceased. They vary very much from time to time, being usually more marked when the heart is acting vigorously. They are much affected by the posture of the patient, being as a rule only slightly marked or even absent in the vertical posture and much louder in the horizontal. They are considerably affected by respiration and are louder during expiration than at other times. They are not propagated so extensively away from the point of their production as are murmurs due to organic disease. These functional murmurs are of extremely common occurrence and it is surprising, if the heart be carefully and systematically auscultated in a series of individuals who are lying down, and who are not supposed to have heart disease, how often one or more of these murmurs may be detected. I found them present in 60 per cent of the inmates of the Surgical Wards of the Sick Children's Hospital, and Mr. W. S. Lemon (fourth year student) found them in fifty per cent of 50 patients taken at random in the General Hospital. Their ages varied from 4 to 84 years. In these cases the apex is usually slightly displaced to the left and upwards. The cardiac dullness is not as a rule extended laterally to any extent but is so upwards, reaching sometimes to the second rib and this is a point of importance which will be again referred to. An unusual amount of pulsation is generally visible in the left intercostal spaces near the sternum.

These murmurs occur very frequently in cases of anaemia, hence the name haemic or anaemic bruits often applied to them.

CASE II.—A girl aged 18 years complains of fainting attacks and shortness of breath. Her blood count shows the red corpuscles to number about three millions while the haemoglobin is only forty per cent. There is a loud bruit du diable in the neck and a well marked systolic murmur chiefly heard on the left side of the sternum about the third cos-

tal cartilage. Under rest and treatment with iron she completely recovered.

But it is a great and yet common mistake to consider that they are limited to such individuals, and the clinician soon discovers murmurs in cases where no abnormality of the blood exists.

CASE III.—A young woman who suffers from well marked exophthalmic goitre. Functional murmurs consisting of vascular ones in the neck and a well marked systolic one in the pulmonary area are present, and yet the blood count shows the red corpuscles to number almost five millions and the haemoglobin to be 80 per cent.

CASE IV.—A. B., medical student, aged 22, complains of palpitation of some weeks duration, has been working hard at his books and feeling run down and is losing weight. Two weeks ago he felt faint and consulted a medical man who told him he had heart disease with enlargement of that organ, and gave him tablets containing digitalis and nitroglycerin to take frequently. He has been distinctly worse since then and the palpitation has been very troublesome. No special shortness of breath and no swelling of the feet. He does not smoke nor drink. Present condition is a pale, anxious, thin youth with cold extremities, has lost twelve pounds in the last year, pulse rapid and slightly irregular, cardiac impulse is marked all over the precordium and a good deal of pulsation is present in the epigastrium which troubles him much. Apex beat is one inch below normal and half an inch outside of the nipple line. There is a loud bruit du diable in the neck. At the apex the first sound is impure but there is no conduction of the impurity into the axilla. At the base there is a loud systolic murmur and accentuation of the pulmonary second sound. The blood is normal, tongue foul. A diagnosis of functional heart trouble was made. He was put on a mixture containing strychnin and, when his digestion improved, on malt and cod liver oil and later on plain cod liver oil. He steadily improved and in six months all the murmurs had disappeared and he had gained eleven pounds in weight. That was three years ago and he has not relapsed in spite of hard work.

Yet one author writes thus (H. A. Hare, Practical Diagnosis, p. 289): "Having found that there is a murmur and *from the absence of anaemia* that it is due to organic cardiac disease, it is now necessary to determine at what orifice, etc." The italics are ours. There the reader must assume that if he can exclude anaemia in a given case of heart murmurs then the disease must be organic. It is on the other hand a common experience to meet with cases of even pernicious anaemia where no impurity of the cardiac sounds can be detected.

CASE V.—Mrs. C., widow, aged 68, is suffering from a chlorotic condition in that her haemoglobin keeps between forty and fifty per cent but

the red corpuscles average four millions. There is no leucocytosis, spleen is much enlarged. Patient is so frail and weak as to be confined to bed most of the time. There are no murmurs present over the heart, even in the horizontal posture.

CASE VI.—E. F., a male hospital patient, aged 35, suffering from profound anaemia, probably pernicious, although the diagnosis is not absolute. No murmurs are present over the heart or in the neck.

In all kinds of lowered general health, occurring as a sequel to some acute disease or perhaps being nothing more than a "run-down" condition, these murmurs are apt to appear. Students working hard for examinations, women worried out of good health by domestic affairs, youths following indoor occupations, and perhaps indulging too freely in tobacco, and in other ways possessing habits which tend to lower their general health, are especially prone to have these murmurs. They may also occur where no flaw in health can be detected as in case I have mentioned. They are not common after middle life.

Even in the absence of anaemia these murmurs may be associated with symptoms referable to the heart such as shortness of breath, palpitation, dizziness and faintness, but there are seldom symptoms of real breaking down in compensation such as oedema, cyanosis and venous engorgement of the liver and other organs, and on physical examination the signs of any marked dilatation of the heart are absent. On the other hand the vaso-motor tone is usually lowered and the arterial blood pressure is consequently low. There is generally a vaso-motor instability with a tendency to bounding aorta and throbbing of the carotids and the extremities tend to be cold.

CASE VII.—B. C., aged 20, lithographer, complains of palpitation, flushing, sweating and trembling, duration about one year. History,—has grown rapidly recently; works nine hours a day at his very close occupation; easily gets out of breath. Patient is a pale, nervous youth, weighs 126 pounds, loud bruit du diable in the neck, pulmonary-systolic murmur well marked. Less marked ones over the other three areas. A good prognosis given of final complete recovery. He was put on Blaud's pills and recommended to be in the fresh air as much as possible. Murmurs gradually disappeared and two years later I made the following note: patient has been working hard all summer and has had no holiday, feels run down but no murmurs are now present.

Compensation for gravity in such patients is usually imperfect and the pulse beats more rapidly than it should do in the vertical posture, rising perhaps 30 or more beats instead of the normal 10 as compared with what it is when the individual is horizontal. It has been commonly noted that debilitated people, for example convalescents from typhoid,

have no cardiac murmurs while laid up, but as soon as they begin to go about and exercise themselves these develop. When individuals possessing functional heart murmurs die, the chief thing found post mortem is a dilatation of the right ventricle, this being largely confined to the conus arteriosus. The pulmonary artery is also dilated and the pulmonary valve is carried upwards and outwards, perhaps as high as the second left costal cartilage. Foxwell (Causation of Functional Heart Murmurs, Lancet Nov., 4th 1899) quotes reports of 20 cases given by different observers in which the pulmonary valves lay on the average behind the second costal cartilage.

(2) *Causation*.—It may be taken for granted that the physical conditions necessary for the production of the mitral and tricuspid murmurs will be the same, and further that the pulmonary and aortic murmurs will similarly be due to the same physical causes, so that we need only discuss the causation of one of each kind of murmur, say the tricuspid, and the pulmonary.

Let us look at the tricuspid murmur first. The only physical condition which will produce a murmur during the systole of the ventricle is one allowing of regurgitation of the blood through the tricuspid orifice into the auricle. The cusps which close the orifice are normal (if abnormal then we would not be dealing with functional heart disease) and therefore it must be the orifice itself which has become too large to admit of its closure by normal cusps. The part played by the papillary muscles is here ignored. The function of these muscles seems to be to steady through the chordae tendinae the cusps and prevent these being everted towards the auricles. A lessening of this action of these muscles might tend to allow of such an accident, but could not well give rise to a regular systolic leakage and murmur. The size of the orifice depends upon the muscular sphincter which surrounds it and the part which the sphincter plays in the closure of the orifice is a very important one. Dr. Clifford Allbutt (Clifford Allbutt's System of Medicine Vol., V., p. 507), mentions some experiments done by Dr. D. MacAlister which showed that the auriculo-ventricular sphincter normally so nearly closes the orifice during ventricular systole that "we began to wonder whether valves were not luxuries rather than necessities; for the sphincter fibres contracting during the systole of the ventricle seemed to reduce the orifice almost to an imperceptible chink." The leakage may be of two kinds; either, first, the sphincter may be stretched along with the rest of the heart muscle, it being merely a part of the ventricular wall; or, second, it may alone be enlarged. Stretching of the ventricular wall occurs acutely in the athlete after some violent exertion. It occurs more chronically in obstruction to the outflow of the blood from the ventricle as in emphysema. In

either case it leads to leakage of the orifice, the normal cusps not being able to close the abnormally large opening. But in functional heart murmurs, signs of dilatation of the heart are largely, although not entirely, absent; and it seems probable that the leakage which occurs at the auriculo-ventricular orifice is not due to stretching of the sphincter from general dilatation of the ventricular wall, but rather to the relaxation of the sphincter-hypotonus of the muscle associated and probably due to the same causes as the general relaxation of the vascular musculature. When dilatation of any hollow viscus having muscular walls, for example the stomach, occurs, it arises from one of two causes, either an increased internal pressure, or, a decreased tone of the muscular coat of the organ. Now, in the case of the athlete's heart the right ventricular becomes enlarged and the tricuspid valve leaks because the intraventricular pressure is abnormally high, just as the normal stomach may become dilated from the imbibition of a large quantity of fluid. On the other hand, in certain weakened conditions the ventricles, and especially the sphincters guarding the auriculo-ventricular orifices, may become dilated *not* owing to increased intracardiac pressure but rather to decreased tonus of the muscular wall, just as very frequently the stomach becomes dilated from decreased tone in its wall without any distension by contents. It goes almost without saying that if both factors be present, then dilatation of a hollow viscus will occur with exceptional ease. Thus, if an individual with his heart in a condition of hypotonus run a race or otherwise exert himself, then that heart will very easily dilate. Thus it is that in certain anaemic or otherwise debilitated individuals functional mitral or tricuspid murmurs occur either without, or certainly with only a slight amount of exertion.

Laennec, strange to say, attributed the functional "bellows" murmurs produced at the mitral and tricuspid orifices to a spasm of these orifices. He does not seem to have noted the murmurs at the base of the heart at all.

Looking next to the functional murmurs heard over the base of the heart we find that two distinct systolic ones occur here: one, a comparatively rare one, in the aortic area; and the other, a very much commoner one in the pulmonary area. This latter is by far the commonest functional cardiac murmur that occurs. We may probably assume, as already mentioned, that the physical conditions will be the same in either case and so will only discuss the common or pulmonary bruit. There is much difference of opinion as regards the causation of this murmur and some of the theories advanced are so fanciful that Balfour has somewhat cynically called the pulmonary area the "region of romance." One may classify the theories regarding this murmur into two groups, first, those

asserting that the murmur is produced at or about the pulmonary orifice, and, second, those setting forth that the murmur is not of pulmonary origin at all, but arises at one or other of the auriculo-ventricular orifices and is merely conducted towards the pulmonary area. It might be mentioned in passing that Potain believed that all functional heart murmurs were cardio-pulmonary, i. e., were produced in the lung by the movements of the heart.

Balfour and Naunyn believed that this murmur heard in the pulmonary area was really due to mitral regurgitation. In favor of this view it was urged that a pulsation could frequently be observed in the second left intercostal space farther out than the normal position of the pulmonary artery, and that frequently the murmur was louder over this outer pulsation than elsewhere. It was considered that this pulsation was due to the left auricular appendix, which, being dilated by the leakage through the mitral orifice, was thrust forward against the chest wall. To my mind conclusive arguments can be used against such a theory. In the first place when a non-functional mitral incompetency exists, i. e., one due to organic disease, the systolic murmur is best heard near the cardiac apex and is transmitted towards the axilla. When such a regurgitation exists, pulsation in the outer part of the second left intercostal space is not observed. Again, in cases of debility a loud murmur is frequently heard in the pulmonary region and another in the mitral area and as the individual improves in health the latter disappears while the former persists for some time. I have again and again observed this clinically. Evidently for a time in such cases there is some mitral leakage which produces a murmur in the ordinary position and as the mitral sphincter improves in tone this leakage stops and the mitral murmur in consequence disappears, and yet for some time longer the murmur in the pulmonary area persists. A second theory is that the murmur is due to tricuspid regurgitation, but this is not a very popular view and it is hard to understand why a tricuspid murmur should in case of debility be heard in the pulmonary region rather than in its own position, and further when cases of debility develop tricuspid incompetence, as they often do, then a murmur develops in the tricuspid area, that is over the lower part of the sternum and is accompanied by true venous pulsation in the neck.

Thus it is most probable to my mind that the murmur is produced somewhere near the pulmonary orifice. If this be the case, then what causes it there? It may be taken as proven that an altered condition of the blood will not per se produce a murmur at a normal orifice. Perhaps the belief in the haemic production of murmurs is the most commonly held one that exists and yet it has been proved again and again both experimentally and clinically that a watery state of the blood does not, other

conditions being normal, cause any vascular or cardiac murmur. Foxwell in the Bradshaw lecture for 1899 (Lancet Nov., 4th, 1899), gave most convincing experimental proof that alterations in the character of the blood passing through a normally shaped heart would in no case cause a murmur, and as already stated and illustrated we have all seen cases of profound anaemia without murmurs and, on the other hand, cases of well marked functional murmurs without anaemia. Skoda wrote in 1839 that "It is not true that a watery state of the blood is a cause of murmurs because in many cases one does not find it." In order to understand the pulmonary murmur it is necessary to look for a moment at some of the physical conditions which govern the production of murmurs anywhere, and here I must acknowledge my indebtedness to Professor J. C. McLennan of the Physical Department of Toronto University for kindly help given.

1. Fluid of any kind flowing at any speed through a cylindrical tube will not cause a murmur, even if the tube be curved, so long as it retain its cylindrical form.

2. Fluid flowing from a cavity into a cylinder will similarly produce no sound. This explains why no murmurs normally exist at the pulmonary and aortic orifices. Here the blood flows from a cavity into a cylinder, there being no constriction normally at the arterial orifices.

3. Fluid flowing from a cylinder into a cavity may produce a sound, but it is not likely to do so unless the flow be very rapid. Probably the murmur heard frequently over an aneurysm is explained on the physical grounds of fluid flowing from a cylinder into a cavity.

4. The figure par excellence which will most easily give rise to a murmur is one in which the fluid must flow through a constriction. This constriction sets up eddies and fluid veins in the blood which cause sound vibrations.

It is easy to understand now how a true stenosis of an orifice gives rise to a murmur, for here we have a cavity (the ventricle) a constriction (the stenosed orifice) and a cavity again (the normal artery beyond). But can we apply the same explanation to the inorganic murmur in the pulmonary region? I think we can. All that is necessary in order to produce the hour-glass figure that we require is that the pulmonary artery be dilated while its orifice remain of normal size, but to this point we will return. Curiously enough Fagge in discussing the functional murmurs which occur at the base of the heart in anaemia, says, "The trunks of the two main arteries are supposed to be unable to retract in correspondence with the diminished volume of the blood to the same extent as the orifice through which the blood enters them." It is hard to understand how a fibrous ring like that at the orifice could retract and furthermore

the bulk of blood in anaemia is not as a rule lessened. Russell, of Edinburgh, believes that the pulmonary murmur is caused by the bending of the pulmonary artery round a dilated left auricle. He points out that in cases where the murmur exists the conus arteriosus is enlarged upwards so that the pulmonary orifice is carried upwards and to the left with the result that the pulmonary artery tends to be bent, as its distal end is a fixed point, and this bending is facilitated by the enlarged left auricle. Now it has been proved beyond all doubt by Foxwell and others by post mortem results that the pulmonary orifice is displaced upwards by enlargement of the right side of the heart from any cause and may even reach to the level of the second costal cartilage, but there is no reason to suppose that the left auricle is distended, much less that it is so distended that the pulmonary artery could be actually dented by pressure from it in order to produce such a result the pressure in the auricle would have to be higher than in the pulmonary artery and such a condition is extremely unlikely to occur. As a matter of fact at the moment of systole of the ventricle the auricle is probably empty or nearly so. Furthermore, bending of a cylindrical tube, as already stated, will not cause a murmur unless it be so acutely bent as to destroy its cylindricity. A common belief is that a dilated conus arteriosus can by itself produce a murmur, but unless the pulmonary artery be also dilated we merely have a cavity opening into a cylinder, which, as already stated, will not give rise to a murmur. Foxwell thinks that it is a dilated conus arteriosus plus a dilated pulmonary artery which is the cause, but although probably such is the actual physical condition existing, the conus arteriosus need not be dilated in order to give a murmur, for its diameter is normally greater than that of the pulmonary orifice. If then the pulmonary artery alone be dilated, this, along with a normal conus arteriosus and pulmonary orifice will give us the hour-glass figure required. It is likely, however, that as Foxwell points out, it is the dilatation of the conus arteriosus which leads largely to dilatation of the pulmonary artery. By its enlargement it moves the pulmonary orifice upwards and this relaxes the strain on the artery and allows it the more easily to dilate. This dilatation of the pulmonary artery has been shown experimentally to take place six times as easily as that of the aorta after due allowance has been made for the different tensions at which they work (Foxwell). Chauveau showed experimentally, many years ago, that a stream passing from the heart into a dilated vessel produced a sound and such an experiment was easily repeated. A rubber tube 20 feet in length was introduced through the tricuspid orifice into the right ventricle of a bullock's heart and firmly secured there. A similar tube was tied into the pulmonary artery which was cut as long as possible.

The near end of the first tube was connected with a water tap and the far end of the second tube was partially closed. The tap was then turned on and the pulmonary artery was auscultated. It dilated gradually under the pressure and a roaring murmur was heard over it which increased in loudness with the dilatation. This experiment shows that a murmur occurs from a dilated pulmonary artery and that the murmur is louder in proportion to the amount of dilation. The same experiment was repeated on the left side of the heart but the aorta scarcely dilated at all and practically no sound was produced. Taking everything into consideration it seems to me most probable that the common functional murmur, i. e., the one heard chiefly in the second and third intercostal spaces, is produced at the pulmonary orifice and is caused by, and is therefore a sign of, a temporary dilatation of the root of the pulmonary artery.

(3) *Diagnosis*.—It is scarcely necessary to emphasize the importance of clearly recognizing these functional murmurs from those produced by organic disease, seeing that in most cases the prognosis and treatment are so different. As a rule no difficulty exists. Given an overworked, neurasthenic youth with a systolic murmur heard loudest about the third left costal cartilage, associated with a well marked venous hum in the neck, and one can scarcely think of anything except functional and curable disease. But some cases are very puzzling if not quite undiagnosable, and in these we require to make use of every known test in order if possible to reach a right conclusion. I venture to give here a categorical list of such tests, compiled partly from literature but largely from my clinical observation, which may perhaps be of use.

1. Functional murmurs most commonly occur during adolescent and early adult life.

2. They are more common in males than in females, although there are many exceptions to this and chlorotic girls are very prone to have them.

3. They always occur during the systole of the ventricles, either accompanying or immediately following the first sound of the heart; that is they are always *systolic* in time. Certain diastolic murmurs have been described by Cabot and others in which no organic lesion was present, but such are so rare as to be of no practical interest. It should take a great deal to make us diagnose a diastolic murmur as functional.

4. While functional murmurs may occur over any of the cardiac areas, by far the commonest site is the pulmonary area and a little below this, say about the third left costal cartilage. A murmur occurring away from this point and unaccompanied by one here, should not be diagnosed as functional unless for some very special reason.

5. A pulmonary systolic murmur due to organic disease is very rare except when of congenital origin. When due to organic disease, other signs, such as cyanosis, stunted growth, clubbed fingers, etc., are usually present, and the pulmonary second sound is not accentuated.

6. The bruit du diable and arterial bruits heard in the neck are always functional and hence when a cardiac murmur is associated with such vascular ones there is considerable reason for believing that it too is functional. On the other hand there is no reason why organic valvular disease should not be associated with functional disease, and one often finds this to be the case. The functional element may clear up in time while the organic one persists.

7. Functional murmurs are as a rule soft in character and accompany rather than replace the first sound. They may however be loud and rasping, and the pulmonary one is especially apt to be harsh in character.

8. Functional murmurs are not so widely conducted as are organic ones and are seldom heard in the axilla.

9. Functional cardiac murmurs vary more under different conditions than do organic ones. They are louder after exertion and during expiration, and they are markedly increased by the supine position and in fact may only be heard while the patient is lying down. The importance of posture as affecting cardiac murmurs was well emphasized by W. Gordon (British Medical Journal 15th March, 1902) and I fully endorse his conclusion "that in describing and discussing murmurs, which posture modifies, the patient's position should always be stated." Zeehuisen (Centralblatt für innere Medizin, March 11th, 1899) also emphasized this point. Foxwell writes thus in this connection, "The murmur in the pulmonary region is much more evident in the supine than in the erect posture, especially if it be listened for immediately upon the patient's lying down before the circulation has been able to accommodate itself to it be not the dynamic rather than the static change in position which is the more important element in its intensification." That the horizontal posture in itself is an important factor is, however, shown by the murmur occurring so well in the children mentioned who had been for months horizontal.

10. The pulmonary second sound is early accentuated and this sign may occur before any murmur is audible. In true pulmonary stenosis no such accentuation is present.

11. In functional murmurs there is usually little sign of hypertrophy or dilatation of the heart and the apex beat is not much displaced. A certain amount of cardiac dilatation and displacement of the apex beat is however quite common, the apex being usually displaced a little upwards

and to the left. Wybauw (Journ., Med., de Brux, March 15th, 1900) has pointed out that some dilatation of the heart is very common in chlorosis and anaemia and Byron Bramwell mentions the same thing.

12. Cardio-respiratory sounds are sometimes mistaken for cardiac murmurs. They are produced in the adjacent lung by the cardiac movements and largely disappear when the patient holds his breath.

13. Functional murmurs tend to disappear as the patient improves in general health. This is not the case with organic murmurs which are apt to become louder as the heart's action strengthens.

14. Signs of breaking down of compensation are rare in functional cases and such breaking down should always suggest organic disease of the valves or heart muscle.

Here it should be mentioned that the term functional heart murmur may be misleading in that, although nothing be wrong with the actual valves themselves, a great deal may be organically wrong with the rest of the heart. Thus in a case of fatty degeneration of the heart muscle with consequent dilatation, a mitral murmur may occur from enlargement of the mitral orifice. Such a case could not be called one of valvular disease and yet the term functional heart murmur would scarcely suggest the serious condition present. Theodore Fisher in a paper read before the Bristol Medico-Chirurgical Society on the 13th of May, 1896, (Lancet July 18th, 1896) states his belief that in most cases of even rheumatic valvulitis where, at the post mortem, vegetations are found about the mitral valve, the leakage occurring during life was not due to the valvular disease, which often is evinced chiefly by a row of small vegetations which could not possibly prevent the closure of the cusps, but was rather due to the associated dilatation of the mitral sphincter. In other words we have a functional condition complicating the true endocarditis, and if care be taken not to strain the heart during convalescence the valve will again become competent in spite of the vegetations on the surface of the cusps. Dr. Fisher continues, "Dr. Caton treated several patients suffering from rheumatism, over whose hearts cardiac murmurs were audible, by rest in bed and blisters over the precordial region. Forty patients were kept in bed on an average of 41 days and in twenty-nine the murmurs disappeared. Dr. Caton attributes the disappearance of the murmurs to the treatment of the endocarditis by the blisters, but it seems far more reasonable to suppose that the prolonged rest in bed allowed the dilated hearts to recover, and the murmurs depending upon the dilatation was consequently noted to have disappeared while the patients were under observation."

15. Seeing that functional murmurs are so often found by accident so to speak, as for example examining for life insurance, it follows that a

great many individuals have these murmurs unknown to themselves or their physicians. If now such individuals be attacked by rheumatic fever, scarlet fever, chorea or any of the other conditions in which endocarditis is apt to occur, we may be led to diagnose the more serious condition, although by close attention to the character of functional murmurs we may generally avoid such an error.

16. Fevers are very apt to give rise to functional murmurs. La Salle (These de Paris No., 9, 1898--1899) found that these murmurs occur in 66 per cent of cases of scarlet fever in females between the ages of 15 and 25. He also by the way noted that vasodilators such as trinitrin tended to increase these murmurs, which is evidence in favor of the theory that they are due to a relaxed state of the muscular wall of the heart and vessels. In rheumatic fever they are also apt to occur. How then are we to distinguish them from murmurs due to endocarditis occurring in these conditions? This cannot always be done and in many cases we must wait and watch, in the meantime of course treating the case as if it were of the more serious nature. But an important point here is that endocarditis usually occurs if at all during the first ten days of the rheumatic or other fever, while functional murmurs are apt to occur later when the tissues have become relaxed by the prolonged fever. Thus the earlier in the case the murmur occurs the more likely it is to be due to organic disease. There are very many exceptions to this rule especially in the direction of functional murmurs occurring earlier.

17. No mention has been made so far of the effect of pressure by the stethoscope in altering murmurs. Some writers put considerable weight upon this and believe that functional murmurs are more easily affected than organic ones by this pressure. Sewall states that all non-organic murmurs at the base of the heart can be stopped by pressure with the stethoscope (C. Allbutt's System of Medicine, Vol., V., Page 508). But I am not convinced that this is the case nor, indeed, that pressure has any marked effect upon any cardiac murmurs.

I have purposely avoided lengthening this paper by giving the details of many individual cases. Any practitioner can I am sure think of so many in his own experience that it seems unnecessary to give them.

In conclusion I would express the belief, first, that we all are too apt to conclude that the heart is organically diseased because murmurs are present, and, second, it may be added, that we too easily assume that the heart is organically sound because murmurs happen to be absent. Either error leads to bad prognosis and treatment.

INFLAMMATION OF THE LACHRYMAL APPARATUS.*

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THE Lachrymal apparatus is divided into two parts, viz., that which produces the tears, and that which carries them away. This latter begins at the punctum, then next the canaliculi of the upper and lower lids, the lachrymal sac into which they empty single or united, and the nasal duct, whose lower extremity terminates beneath the inferior turbinated bone. It is with this latter, or the drainage part, my remarks have to do.

A troublesome cause of watering of the eye is either stricture of the punctum or its displacement, or catarrhal inflammation of the canaliculus, or some stricture in its passage, or some foreign substance in its interior. A very delicate probe can be passed through the punctum and canaliculus to dilate them. Then by means of the lachrymal syringe liquids can be sent in, and in this way the inflammatory conditions can be removed, and the patency of the tract shown. Also, the patient can be given drops to use at home. The liquids which can be used with the syringe are solution of cocaine to dull the sensitive inflamed tissue of the canal, adrenalin solution, and many others. The patient can be given adrenalin solution to use at home by filling with it the inner corner of the eye and allowing it to remain in ten minutes, or so, in order that it may make its way into the canaliculus. If this should not be satisfactory, the canaliculus can be slit up as devised by Bowman.

This operation is especially applicable as a remedy for malposition of the punctum. However, inflammation of the lachrymal sac is that of which I wish especially to speak. Uncomplicated, primary inflammation of the lachrymal sac is seldom met with, and, if it occur, is usually due to struma, external violence, or the entrance into the sac of an irritating fluid. The usual cause of this inflammation, or dacryocystitis, as it is called, is stricture of the nasal duct. The drainage of the sac being interfered with, the fluid contents accumulate and undergo petrificative changes. In this way a chronic catarrhal inflammation or blenorrhœa is set up. The distended sac is continually sending back muco-pus through the canaliculi into the eye. Acute exacerbation may occur.

This abscess of the sac is attended by much suffering and constitutional disturbance. Sometimes the redness and the extent of the swelling is so great as to be confounded with erysipelas. The attack runs its course. The tissue over the sac and the integument become

* Read before the meeting of the Ontario Medical Association at Toronto, June, 1901.

affected. When the pus makes its way through the sac wall into the overlying tissue, the pain ceases and an abscess is formed. At the beginning, an effort may be made by leeching, cold and calomel purging to cut short the attack. As a rule this is futile. When the progress of the attack cannot be stopped then apply freely linseed poultices. When there is fluctuation incise through the integument into the sac and thus give exit to the pus.

Later on the condition can be treated by another operation which I shall shortly mention.

A close relationship exists between the drainage apparatus of the eye and the nose. The membrane of the duct is continuous above with that of the sac and below with that of the nose. It is very vascular and is a periosteal and mucous membrane.

The calibre of the duct varies very much, and in the skull will admit the passage of a probe sometimes of three millimetres only, and again of seven in diameter. Owing to the peculiarities of the lining membrane of the duct, it is easily seen why an inflammation may lead to stenosis of the duct, and later on to the formation of periosteal and bony strictures.

This condition never undergoes a spontaneous cure, and, unless treated, is a standing menace to the eye, being a cause of great annoyance, aggravated at times by acute painful attacks.

Inflammation of the conjunctiva has very slight tendency to affect the lachrymal sac, as evidenced by its absence in the most severe forms of conjunctival inflammation.

The history of the inflammation of the lachrymal sac and strictures of the nasal duct would fill books, I may say.

I intend to give the plan of treatment which I have found the most successful. The instruments I use are silver styles of various shapes: probes, Nos. 1, 2, 3 and 4, out of a series of eight sizes; a Bowman's and a Weber's canaliculus knife; and under certain conditions, a Graefe's cataract knife and an Anel's syringe. Having decided to operate by means of a Weber's canaliculus knife, I divide the canaliculus into the sac.

The procedure of slitting the canaliculus was devised by Bowman and was a great advance upon all previous methods of dealing with lachrymal obstruction, and facilitated the passage of probes, which bear his name. As this form of treatment was not satisfactory, several oculists, without being aware of the labors, of each other, decided that if larger probes were used the results would be more satisfactory. These probes varied in size from $\frac{1}{4}$ mm. to 4 mm. At the first probing and afterwards the usual rule is to pass as large a probe as possible every

other day and allow it to remain in position quarter to half an hour. Then later, once every week, ten days or a fortnight, and, finally, every month or two, till the stricture shows no tendency to return, and the blenorrhœa of sac and the inflammation of duct have disappeared. Styles of lead and silver, if used, are used under protest almost, and would not be considered, if the patient could remain so as to have uninterrupted probing.

Then some go on naively to remark that the application of medicated solutions of various kinds has never secured any attention, as they were considered almost useless.

With this mode of treatment, viz., the use of as large probes as can possibly be passed and the non-use of medicated solutions, I do not agree. In fact, my procedure is not only different, but I consider much more easily borne by the patient, and also more successful as a curative measure. Having divided the canaliculus into the sac, I introduce by a syringe a 5 per cent. solution of cocaine, then pass a probe, sometimes Nos. 1 and 2 only, and sometimes Nos. 3 and 4, but never any larger, though the largest of the series is No. 8. I irrigate the whole passage, so that the fluid passes freely into the nose, with adrenalin solution, followed by a solution 1 in 2,000 of permanganate of potash, or any other you may choose to use. Then I pass a silver style and allow it to remain in position.

The probes are passed through and taken out at once, so that the whole operation takes but a short time, and is comparatively easily borne by the patient. Then the patient is directed frequently to bathe the parts with hot water. I do not disturb the style till the tenderness consequent upon the operation has subsided, which may be a few days or so longer. On the next visit I withdraw the style, then use the syringe to send in the cocaine solution followed by adrenalin solution, and solutions of permanganate of potash, of argyrol, tannic acid, etc. In this way the sac and duct being pervious are freely irrigated. The style is then replaced. The whole procedure is done quickly with very little suffering, and is a decided contrast to the passing of probes till one is tried so large that, after very firm pressure, it fails to go through, and, if it does, is allowed to remain in position for quarter to half an hour.

This procedure of mine quickly stops all discharge, and hence a condition is established which aids very much in the removal of the stricture. In a short time I send the patient away to reappear at stated intervals, gradually lengthening. While the parts have apparently become healthy, the eye is often annoyed by a little watery discharge, more or less pronounced, which is very disagreeable to the patient and unsa-

isfactory. This often arises from an unevenness of the floor of the divided canaliculus, caused by firm little fibrous bands stretching across its floor, in fact, more like a rising up of the floor here and there into sharp ridges. This is not noticeable at first, but comes on in the process of treatment. It is found out on passing a probe along the floor of the canaliculus, it meets with little obstacles, which catch its top. These can be easily ridden over, so that it goes on and enters the sac. These little bands act as shallow dams and interfere with the proper drainage of the eye. These I divide as they arise in the course of treatment by a sharp-pointed Graefe's knife. I am always on the alert for these bands. This condition is a point not mentioned, or, if noticed, not paid any attention to, whereas I feel it to be of great importance to the full drainage of the eye.

In some cases it is difficult to pass a probe on account of the nature of the stricture. To do so most firm pressure is sometimes needed, so firm that the probe has to be grasped by the hands, and, being sure of the proper direction of your probe, to be forced through, having always the probe so well under command that, when it passes, its course can be stayed. I well remember one case of very severe and long-established inflammation of each lachrymal passage, and which, moreover, had been given up as incurable, when it took me two months to force the passage on one side. In this case, by very firm pressure, I finally made a lodgment in the duct ; and then by firm pressure, with both hands on the probe from time to time, finally it went through the natural passage.

The results under my form of treatment have been very satisfactory ; and, what is as gratifying as success, with very much less pain, discomfort and dread to the patient than under the treatment commonly advocated. In children chloroform should be used for the first operation ; but, in the after treatment of the case on the lines laid down by me, it is not needed, as the suffering is so minimised.

TUBERCULOSIS OF THE FEMALE URINARY ORGANS. REMOVAL OF KIDNEY AND URETER.*

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IT has long been observed that certain cases of chronic cystitis were incurable, and that in spite of every method of treatment the wretched sufferers went on from bad to worse until they perished miserably. In time, as the art of diagnosis advanced, it was learned that these

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cases were tuberculous, and now that we have means of demonstrating the presence of the tubercle bacillus in the urine the diagnosis is easy.

Nevertheless for a long time the improvement in diagnosis was of little value, except to establish an absolutely unfavorable prognosis, for it was still found that only temporary relief could be obtained from any form of treatment.

When at autopsies, held on persons who had died with tuberculous disease of the bladder, a kidney, and, perhaps, the corresponding ureter, were found to be also greatly disorganized with tubercular disease, it was at first supposed that the infection had ascended from the bladder, involving the kidney secondarily.

Finally, however, cases multiplied in which after a tuberculous kidney had been removed, because the principal disease appeared to be located in it, although there was some tubercular disease of the bladder, the result showed that the tuberculosis of the latter organ improved, and finally disappeared under judicious treatment and favorable circumstances. It is now established, therefore, that tuberculosis of the urinary organs is a descending affection, that it first obtains lodgment in the kidney, supposedly deposited there by the blood-stream from some other focus in lung, glands, bone, skin, etc. That the infection then descends with the urine, probably not at first attacking the ureter. That, finally, from some obstruction to the escape of urine from the ureter into the bladder, the current of urine in the ureter is slowed or made to stagnate, and infection of the ureter follows.

By observation of a very large number of cases, and a careful study of post mortem examinations the pathologists are able to assure us that tuberculosis of the bladder is rare, except in cases in which the kidney is involved. They have also established the fact that fortunately only one kidney is affected in the vast majority of cases.

Clinical experience, and the results of surgical operation confirm these assertions, and also establish the fact that after removal of the diseased kidney the tuberculous bladder is generally curable.

The case which I report to-day, and from which I show the specimen, is of much clinical interest, because there were never any symptoms referable to the kidney, and because a long course of life in the open air improved the patient's health so markedly that she was brought up to a condition fit for the serious operation of nephrectomy, and now appears to be in a position to overcome the tuberculous infection which has become entirely localized.

Miss X., age 30, was admitted to my private hospital in February, 1902. She had been healthy as a girl, but for several years previous to the above date had suffered from pain at menstruation. In 1900 she un-

derwent a dilatation and curettage of the uterus, but at that time the womb was found to be retroverted and adherent. An operation for release of the pelvic organs was declined.

During the ensuing two years the patient gradually failed in health, suffering from pain in the back, low down, and a frequent desire for micturition, with much pain in the bladder. On examination, the heart and lungs were found normal, urine showed cystitis, bowels constipated. It was supposed that the cystitis was referable to the pressure of the retroverted uterus.

February 20, 1902. Curved transverse incision, uterus found heavy, badly retroverted, and held firmly by many adhesions. Both tubes swollen, tortuous occluded, and firmly adherent; both ovaries enlarged and cystic. Uterus amputated at level of int. os. and removed with the appendages. Appendix found covered with adhesions and removed.

March 2. Stitches removed, first intention, primary union. Bladder somewhat better, urine clear, and can be held longer. Urine too alkaline, sp. gr. 1010, pale, contained albumen, sediment showed pus and cocci—not searched for tubercle bacilli. Bladder washed out daily with pot. permang., or boric acid. Cystogen internally. Went home in good condition April 1.

April 11. After getting home bladder not washed out for ten days, symptoms increased in severity, and urine became nearly as bad as at first admission. Used irrigation daily at first, and then every three days, cystogen internally t. i. d., much improved, but not cured.

May 8. Found tubercle bacilli in sediment—fairly abundant—patient re-entered hospital. Dilated urethra and touched with silver nitrate some ulcers found in the bladder.

May 17. Bladder seems better, continued treatment, and after each irrigation left emulsion of iodoform in bladder. Patient is now kept out of doors nearly all the time reclining on a couch, and receives the largest amount of food which she can be made to take, in order to improve the general health as far as possible.

July 3. Sudden rise of temperature to 103deg. in the evening, next morning 101deg. Since then every evening 101deg. Spit blood July 5.

Ulcers cauterized, May 10-27, June 6-16-26, July 26, August 16, September 19, October 10-24. During this time marked improvement physically and mentally, gained in weight.

October 28, injections in bladder of protargol every day.

January 7, 1904, process seems to be pretty well localized about left ureteral meatus. Stays out of doors on couch right through the winter, except at night, and then has three windows open; very marked improvement in general health, weight and color.

May 26. Dr. Howard Kelly examined the patient, found extensive ulceration round opening of left ureter, constriction of left ureter about inch from meatus, so tight that catheter cannot be passed further. Gave opinion that there was no doubt that the kidney on left side was tuberculous, and no longer functional. Right side probably healthy, advised nephrectomy.

June 18. Operation after the method of Kelly. Incision in left lumbar region ; kidney found and brought to surface. It was a great, irregular pus-sac, with thin shell of cortex.—Separation of adhesions, ligation of vessels twice with catgut, vessels divided at hilus, ureter clamped, divided, ligated and free end cauterized. Incision closed with deep running sutures of catgut and interrupted sutures of silk worm gut, leaving rubber tube and gauze drain. The ligature on the end of the ureter was left long and brought out between two stitches.

Second incision parallel to Poupart's ligament from anterior superior spine of ilium nearly to spine of pubis ; peritoneum pushed back ; ureter, which adhered to peritoneum, easily found by pulling on free end of ligature. Ureter freed from adhesions, free end of ligature cut off and free end of ureter brought out from the second wound. It was then carefully separated almost down to the bladder, where it broke off ; the upper end was very large and thick, but at the place where it broke off it was much smaller than normal, and the whole wall was infiltrated with tubercular matter representing the stricture ; here the ureter was lost in a mass of inflammatory connective tissue. As it seemed to me that any further attempt at removal of the lowest part of the ureter could best be done if necessary from the vagina, I next closed the incision with catgut and silk worm gut, leaving drainage to stump of ureter. Recovery uneventful.

June 24. Most of stitches removed, wound in groin healed ; wound in back only slightly open with some drainage ; a wick was put in. Shortly after the operation there was a large amount of pus and blood in the bladder which rapidly cleared up under irrigation of that organ.

July 1. Patient sitting up, feels and looks much better than before the operation ; temperature normal.

As compared with this chronic affection, the record of the second case which I have to report may be of interest on account of the sudden onset of violent symptoms.

Miss Y., aet. 38, had been in fair health until within two or three years, when she began to have pain in the region of the right kidney at intervals, but the pain was not severe nor paroxysmal. Sometimes also she would have scalding pains on urinating. During the last six months she observed that after the painful attacks the last of the urine voided contained pus. She did not ask for medical assistance, however, suppos-

ing that the pus came from the vagina, and was "the whites." She continued to lead an active life, never being confined to bed until the present attack.

On June 28, 1904, after being about and active as usual, the patient was seized with a violent pain in the region of the right kidney, running down the course of the ureter. Provisional diagnosis of renal calculus was made, and morphine was administered with much relief. As the urine was alkaline, turbid and offensive, containing albumen and a purulent sediment, cystogen was given internally.

The second night the pain returned more violently than ever. Temp. 103.5deg., pulse 110. Large hypodermic doses of morphine gave only partial relief. At 4 a.m., the patient passed with her urine a soft solid cast of the whole ureter, which had evidently been obstructing the flow of the urine, for the pain soon disappeared. The cast was some six inches long, and larger than a normal ureter. It had such a foul odor that it was thrown away at once. No calculus was passed at any time. Urine foul, albuminous, alkaline, turbid, purulent.

During the ensuing (second) day, the pains returned; temp. remained 103deg.; there was a slight chill. I was summoned in the afternoon, and agreed with the attending physician, Dr. Bullock, of Weymouth, that the case was serious, and required prompt interference.

The patient was brought to my private hospital the same evening, and operation followed next morning; 62 hours after the beginning of the attack.

The kidney was exposed by the oblique lumbar incision, and was found to be firmly adherent to the adjacent tissues, not much enlarged, dark, irregular, cystic in part, and evidently disorganized. The renal pelvis and ureter were greatly dilated.

It was liberated from the adhesions, and the hilus found, and the vessels clamped and divided. They were then tied twice with separate ligatures of strong catgut. The ureter was cut across between clamps as low down as possible, where it was as large as the little finger. The free end was ligated with catgut, and the extremity carefully cauterized. Wound cleansed with hydrogen peroxide. Drainage of rubber tube and gauze, to stump of ureter, and gauze to stump of vessels.

There was a very free discharge from the drain, soaking the dressings, the condition was critical for three days, from diarrhoea, feebleness and vomiting, which at one time became faecal. Pulse 110, temp. 100deg. The vomiting was checked by small doses of morphine and lavage of the stomach. The urine became clear by the third day, under irrigation of the bladder.

Examination of the specimen showed that the kidney was completely disorganized, and the cortical substance destroyed. The whole in-

terior surface was gangrenous. No stone or gravel in the kidney. Ureter much dilated, thickened and inflamed. Extremely foul odor on cutting across the ureter, and on opening the kidney.

In this case no measures were taken to prove the existence of the other kidney, because during the time when the ureter was known to be occluded by the cast, urine was passed freely, being secreted by the other kidney.

During convalescence a sufficient quantity of urine was passed at all times, and, after three critical days, the patient became fully convalescent.

THE USE OF THE X-RAY IN THE DIAGNOSIS OF DISEASES OF THE BONES.*

By E. A. CODMAN, M. D., Boston, Mass.

IT would be extremely uninteresting to you to listen to a description of each form of bone disease in which I have found the x-ray useful, or to listen to a rehearsal of a series of cases, but I trust that my method of using the x-ray in diagnosis may be worth your attention. In what I have to say to-night I shall limit myself to diseases of the bones, although the same method of interpretation is valuable in the explanation of any x-ray plate.

My particular hobby in x-ray work has been "interpretation." By the interpretation of a plate I mean the drawing of conclusions from it as to the actual anatomical or pathological condition of the part which has been taken. I fear that I have neglected electrical and photographic technique shamefully, for I have felt that the thing which is worth a physician's time in x-ray work is his ability to draw conclusions from his plates after they are taken. Any man without a medical education may soon learn to take a technically good x-ray picture, but it requires an accurate anatomical and pathological knowledge to interpret one correctly after it is taken.

The structures of machines, coils, tubes, anodes and cathodes may be changed indefinitely in the next twenty years, but the anatomy of the bones and the manner in which they are affected with disease will be the same, and it is with these same diseases that experience in interpretation will prove valuable. The ultimate object is to obtain knowledge which will assist in curing the disease. To this end there are four steps.

1. The knowledge of the essential characteristics of an x-ray picture, i.e., that it is a projection or chart of the densities of the different parts of an object.

* Read at the meeting of the Maritime Medical Association, July, 1904.

2. The knowledge of normal x-ray anatomy, i.e., the appearances made by the normal bones in an x-ray picture.

3. The knowledge of the pathology of different forms of bone disease, i.e., the exact manner in which each invades the bone.

4. The ability to reconstruct a picture of the pathological conditions in the individual case from the inferences deduced from x-ray pictures of it.

When we have a competent knowledge of these four essentials, we may reason as follows :—

An x-ray may differ from the normal appearance of the tibia in that it shows a thickening of the cortical bone of the shaft. Since the shaft is affected, it is more likely to be syphilis than tuberculosis, which almost invariably affects the epiphysis. Since there is no loss of bone substance or formation of a sequestrum it is not osteomyelitis. The patient is young, therefore, it is not Paget's disease. There is no chronic lung disease, therefore, it is not osteo-arthritis pneumonique, etc., etc. Sherlock Holmes would have been a great interpreter of x-ray pictures.

Let me speak a little more fully of each of my four divisions.

1. *The knowledge of the essential characteristics of an x-ray picture.*—The x-ray picture or skiagraph is not like any other kind of a picture we are familiar with. I have racked my brains to try to find something to compare it with. My best definition is a chart of the densities of the different portions of an object. Stop to think a minute ! It is not a shadow, for a shadow is merely an outline bounding a homogeneous interior. It is not a photograph, because a photograph shows merely outline and the surface. It is not a median section, for a median section gives no idea of what lies on either side. It is not a picture of an interior, for you may see it in portions of the object which are on both sides.

It really shows much more than any other kind of a picture with which we are familiar, for, like the shadow and the photograph, it gives the outline, and, like the median section and interior view, it gives some knowledge of what lies inside the bone. To this Maritime Medical Association I may compare it to a graphic representation of a chart of soundings where, instead of the number of fathoms, is registered, in black and white, the number of atoms which each ray meets in traversing the bone. The less the number of atoms met in each portion of the bone, the deeper and darker will be the imprint left by the ray on the plate.

One must remember that the greater the atomic weight of an ob-

ject or substance the more obstruction will it offer in the path of the ray. This is equally true of each little part of that object or substance.

I need not remind you, too, that the portions of an object which are not in contact with the plate, are enlarged because the light radiates from a single point. In this, skiagraphs resemble shadow pictures.

2. *The knowledge of normal x-ray anatomy.*—X-ray anatomy differs greatly from the osteology which we learnt at the medical school. We then learnt to describe the surface of bones, and paid little attention to the density of their various parts. In the x-ray picture we recognize the bones entirely from their outline unless we happen to remember the look of their sections, but in the x-ray the outline surrounds a chart of densities instead of surface markings. In the skiagraph the sustentaculum tali and the unciform process appear as dense rings in the middle of the os calcis and unciform bone, instead of protuberances on their surfaces. The epiphyseal junctions in children appear as irregular overlapping ellipses. The olecranon fossa seems like a hole in the lower end of the humerus.

3. *The knowledge of the pathology of different forms of bone disease.*—I mean by this especially, the particular modes in which each disease invades the bone. How have our predecessors in medicine learned to classify the different forms of bone disease? By the study at operations or autopsy of the different characteristics of each disease confirmed by the clinical history and the microscope. For instance, in syphilis of the bone, they have given us the following facts:

A syphilitic bone has no odor. The x-ray cannot tell us this.

Gummatous infiltration of a bone is not purulent, but a grayish or yellowish granulation-like tissue. The x-ray cannot tell us this.

The surface of syphilitic bone is rough to the touch and the periosteum adheres with more than ordinary tenacity to it. But the x-ray cannot tell us this.

So we might go on with other diseases mentioning many things which the x-ray will not tell us.

Those of us who have had experience do not expect to tell how a bone smells, or how it looks in cross section, or how it feels on the surface. We may, however, infer how it smells, or how it looks, and how it feels after we have found out some of the other things; for, fortunately, our predecessors have told us other things about syphilis of the bone.

For instance, syphilis almost always affects the shaft instead of the epiphysis. This we can find out from the x-ray.

Syphilis seldom forms sequestra. This we can find out from the x-ray.

When one bone in the body is affected by syphilis other bones are x-ray.

Take another disease, e.g., rickets. The x-ray tells us that the zone of ossification is broadened, that the adjacent surfaces of the diaphysis and epiphysis are irregular, that there are areas of little density in the broadened portion of the diaphysis, that there is increased cortical bone on the concave side of the distorted long bones, etc., etc. It does not tell us whether the epiphyseal line is red or yellow, or how the concave side smells, but it does tell us enough so that we should not make one mistake in a hundred in making a diagnosis of rickets. We might then infer that the epiphyseal line is purple because we know that the section of a rachitic bone shows a purple epiphyseal line.

Let us suppose an instance and draw our deductions.

Here is a skiagraph of a tibia, showing a loss of substance in its lower end. This much we can be sure the x-ray says truly, but when we begin to infer what tissue of little density lies in that cavity where the loss of substance has occurred, we begin to tread on dangerous ground. Now we know from pathology that such a loss of substance may be caused by an abscess in the bone or a medullary sarcoma or chondroma or gumma. We examine the x-ray more closely. If it is an abscess it is likely to have a certain amount of new bone formation in its wall. This will make the abscess cavity appear to be surrounded by a dark wall. If the light area is due to a medullary sarcoma, we may see trabeculae passing across it here and there, giving it a mottled appearance. If chondroma, it has probably an erosion or a protuberance when seen in the lateral view. If a gumma, probably there are other lesions in other bones.

Perhaps we shall have recourse to the clinical history for the most important evidence. I would no more make a diagnosis on the x-ray alone than I would say pneumonia on the strength of the stethoscopic examination alone. Sometimes I should feel pretty sure in either case. but I should like to hear a cough, or to see the temperature chart and a little rusty sputum before speaking positively.

I have no intention of claiming to make all diagnosis from the x-ray, but it is of great importance. What it does tell us is how the inorganic portion of the bone is affected, and this is a great assistance if our knowledge of pathology can tell us the way each disease affects the inorganic portion.

4. *The ability to reconstruct a picture of the pathological conditions in the individual case from the inferences deducted from x-ray pictures.* This fourth requisition means a thorough knowledge of all the other three steps. One must understand the distortions which are character-

istic of every x-ray picture. For instance, the x-ray picture of a cube may appear like two squares, a larger and a smaller ; or like two superimposed trapezoids, varying in shape according to the angle from which the rays come. One must know how these distortions affect the normal x-ray anatomy of the various bones. One must know the pathology of each disease thoroughly. Finally, one must reconstruct the cube from the larger and smaller square, the actual bone from the x-ray chart, the kind of disease from the particular way in which the bone is invaded, and the odor, the appearance, and the feeling from knowledge of pathology of the disease itself.

Is this way more difficult than deducing the appearance of the heart from what you hear of its murmurs ? Can you not form a mental picture of the appearance of the kidney from your examination of the urine ?

Expressed simply, my statement is this : If you know how to interpret it, a good x-ray will tell you much of the condition of the inorganic portion of the bone. Different diseases affect the inorganic portions of the bone in different ways. If you know what these different ways are you may get great help in your diagnosis from the x-rays.

MEDICAL THOUGHTS.

By JAMES S. SPRAGUE, M.D., Stirling.

"These are the thoughts of things which thoughts but tenderly touch."

JOHN Brown's sketch of his father—a physician—is said by S. Weir Mitchell to have given a nearly perfect story of the simple and honest, dutiful and thoughtful life work of the every-day doctor. Miss Jewet's "The Country Doctor" has done our profession much service and faithful portrayal.

Osler recommends us to read medical biographies such as Wilson's Life of John Reid, Morley's Life of Jerome Cardan, Pichot's Life of Sir Charles Bell, Marion Sim's own book, Ambroise Pare's sketches.

In later years such works as The Luck of the Vails, Flames, Sir Richard Calmady, and Cinderella have appeared. A Comedy of Conscience by Dr. S. Weir Mitchell, a most charming and classical writer, invites our reading. Warren's Extracts from the Diary of a late London Physician, though old, is ever charming. Brown's Religio Medici and the Essay of Noxon of Guys, Pilocereus Senilis, are treasures. Osler speaks highly of Plato, Montaigne, Rabelais, and Oliver Wendell Holmes, the lives of David and Isaiah.

Young doctors are ambitious for the plaudits of men, but those who "see the shadows creepin' and the licht's nae burnin' lang" await the

benediction. In due time this benediction is quickly said, and in a few brief years is never lisped. "A nice doctor" is the usual epithet that is applied to the memory of many who have gone before ; and, no doubt, is in cold storage for you and me. Many who have won the V. C. are now forgotten, and there are many MacLures in your nearest churchyard. Strive to be one, even if undecorated ; for there is a world beyond.

It is not non-professional to have a *hobby* if such does not alienate one's interest from his life-work, and is ancillary to its interests. As an example, a fellow M. D. has, by close study during three years, acquired a speaking and writing knowledge of the German language ; and, while so engaged, has done an extensive practice. Another friend, M. D. for many years, has set aside each year a subject for some special study, during leisure moments ; and, as a result, has become a safe specialist in several important specialities or branches. His work and application are commendable, yet he has too few followers. These two illustrations are given as incentives to those whose study and researches are without design or order.

Dr. Adami, in an address delivered several years since at Ann Arbor, Michigan, made reference to the very defective penmanship of medical students (and doctors ?) That such is too common, I have had, since writing this statement, abundant proofs to verify by close study. That those who are engaged in special practice are good penmen and make use of fair punctuation, is very evident. If these points are not ideal, there are abundant evidences of exactness in the finish and the work to illustrate a knowledge of ideality, or perfection, really worth study and observance.

"Blue-eyed and bright, but waning fast into the sere of virginal decay," is W. E. Henley's description of the nurse. Of the House Surgeon he says :—

"Frank-faced, frank-eyed, frank-hearted, always bright ;
Bland as a Jesuit, sober as a hymn ;
Humorous, and yet without a touch of whim ;
Gentle and amiable, yet full of fight."

A fellow graduate tells us he has written but one article for publication in a Medical Journal. In some respects such is commendable ; but, as a rule, it is not. Are we to sit like our grandsire cut in alabaster and otherwise have nothing to say or to state, either for or against the blessings or evils done and about to be done to our profession ? Have we, who have been over the roads, nothing to state in the way of cheer to those who are just commencing their life-work in practice ? When a school boy, my teacher taught me :—

"Count that day lost whose low declining sun,
Views from thy hand no worthy action done."

It is well for us that before "desire shall fail and those that look out of the windows be darkened" to do something in the way of advice for those who are now to take our place. The cost of the work is nothing. The good will be remembered. For our profession, is not the reward worth our past time effort?

If experience teaches anything, and certainly in no other profession besides medicine does it teach more, is it not our duty and right to give a few pointers or hints to those who are embarking that they may not run on quick sands or otherwise wreck their crafts on dangerous shores? The answer is a plain—Yes.

If Hippocrates, whose *oath* is the most memorable of all human documents (as says Gomperz) has suggested that the sons of physicians shall be taught without fees the science of medicine, why is it that our medical colleges exact fees from such?

Would it not be in the best interests of students in medicine that the M.B. degree be granted after passing the primary examination (such as is done by Laval University), and the degree of M. D., or M.D., C.M., after the finals? Would it not be well to make M.D. course *seven* years, so as to embody the B.A. or B.S. in it?

Is the degree of M.D. or M.B. of such low estimation with the senates of several universities that they require of dentists and pharmacists a matriculation examination exactly similar? The profession, at large, of medicine, as does the dear public, requires more. Dentistry is a *trade*—that of a mechanic—nothing more. The B.A. or B.S. (the first named better) is imperative as a pass for matriculation in medicine. The ability to know the contents of a 5th reader or *to read* is only required or should be required of dentists. The doctorate to dentists, to Farriers, to piano players, etc., reflects no honor on the title. Such is the opinion of the dear people and they are no fools. Such is grievous to men in medicine, and it is indeed humiliating to the M.B. or M.D., Toronto University or any university, to notice: "Honor graduate of Toronto University" attached to the newspaper card of so many dentists, of which Dr. J. Sydnier Jones, Dentist, (Honor Graduate of Toronto University) is a common notice in country newspapers. Domine salve nos'—had we not better "throw up" the doctorate to farriers, dentists, etc.?

McGill has recently established a faculty in dentistry. Whether the words, "Thrice illustrious and with honors" will be permitted each graduate to use is not yet stated. This encouragement will arouse tonsorial artists with ambition to obtain the D.B.A., i.e., Doctor in Artibus Barbae.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

IMMUNIZATION AGAINST RATTLESNAKE VENOM.

The summer number of the *University of Pennsylvania Bulletin* contains a letter from Hideyo Noguchi, M.D., who was sent to the State serum Laboratory, Copenhagen, by the Carnegie Institute to investigate this subject. He states that after five months he has succeeded in preparing a strong anti-venomous serum of which the therapeutic value has been proven by experiment. 0.0005 gram of the dried crotalus venom is a sure killing dose for a guinea-pig weighing 250 grams when given intraperitoneally, causing death in twenty-four to thirty hours, this is the dosis lethalis minimum, twenty such doses cause death in three to four hours. Experiment showed that if the venom and antivenomous serum injected simultaneously, 2.5 c.c. of the latter will protect a guinea-pig against 6 mg. (i.e., twelve killing doses) of the dried crotalus serum: no symptoms developed after the treatment. If the antivenomous serum is given one hour later than the venom about five times larger amount of the serum is necessary to save the animal.

Animals which are poisoned with the above-mentioned dose of venom become critically ill after three hours, and will succumb within an hour afterwards, but if given 4 c.c. of the antivenom at this stage the animal will recover.

Injection intraperitoneally is much more rapidly and certainly fatal than the subcutaneous method, which is comparable to the snakebite, while advantage may be taken of the intravenous method for the introduction of the therapeutic agent.

SCHOOL DIPHTHERIA IN THE METROPOLIS.

In the section of State Medicine of the British Medical Association Thomas, Assistant Medical Officer to the London County Council, read a paper on this subject in which, as the result of experience in a number of outbreaks, he advises against the closure of schools on account of diphtheria, as unnecessary and unsatisfactory.

He recapitulates as follows:

(1) Diphtheria is spread by schools to a certain and considerable degree. (2) It is spread by direct personal transmission. (3) It can

be checked by swabbing and excluding children carrying organisms of the disease. (4) These children are chiefly mild actually suffering cases. (5) Their age is usually between five and eight. (6) Pseudo-diphtheria organisms may be safely ignored. (7) School closure for diphtheria should be looked upon as a confession of impotence and defeat. (8) There is urgent need on the part of medical practitioners of the role of slight cases and carriers. In many instances children sent home by the teachers have returned after seeing a doctor who has said they were not suffering from diphtheria, when their throats were swarming with organisms. (9) All contacts with diphtheria cases should be rigorously swabbed before being allowed to mix with the general population. Disinfection of homes without this precaution is futile. (10) Much greater facilities for bacteriological examination need to be provided.

FORMALDEHYDE IN MILK.

The fact that formaldehyde was being used to control the bacteria in milk, led Dr. Rivas to undertake an investigation into the length of time that this subject would remain discoverable when added to milk. Experiments were made with 15 samples of milk, and the formaldehyde was added to it in the different proportions of 1 in 1,000, 1 in 10,000, 1 in 20,000, 1 in 50,000, and 1 in 100,000, the results were as follows:

(1) Small amounts of formaldehyde added to the milk will gradually disappear from such milk in the course of 24 to 96 hours.

(2) This amount of formaldehyde exerts some detrimental influence upon the activities of the bacteria in the milk, as shown by the relatively lower bacterial content of such sample when compared with control samples.

(3) Samples of milk containing such small amounts of formaldehyde acidify more slowly, and do not coagulate as early as control samples.

(4) The fact that samples of market milk show unusually good keeping qualities, and yet apparently do not contain formaldehyde, should at once raise suspicion that these samples may have had formaldehyde added to them, and that in time the formaldehyde has disappeared from such milk.

THE ECONOMIC VALUE OF REVACCINATION.

In the *British Medical Journal*, for July 30th, there is a report of an address of Mrs. Garrett Anderson, given at the Congress of the Royal Institute of Public Health on this subject. It was shown very conclusively that the cost of providing proper hospital facilities and

equipment for isolation in case of an epidemic of smallpox would be excessive, and a comparison of existing conditions in England and in Germany, where compulsory revaccination is the rule, showed that the latter country was able to avoid the greater part of this expense.

There are each year a few cases of smallpox in Germany due to importation, or unsuccessful vaccination or revaccination, but so little is the danger incurred in a population largely immune that the only provision required is a separate pavilion in a general hospital. Thus Berlin with a population of 2,000,000 provides a pavilion with twelve beds, while London in 1900, a non-epidemic year spent £30,000.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division ; Surgeon Toronto Western Hospital.

COCAINE ANAESTHESIA IN GENERAL SURGERY.

In a recent number of the *Columbus Medical Journal*, W. J. Means writes favorably of the results of the use of cocaine in many of the operations of general surgery.

Cocaine should never be administered carelessly or without due preparation to antidote any untoward symptoms.

Its action varies in different persons, but individual susceptibility is largely confined to nervous persons, women especially, and many of the nervous symptoms are due to the fear and horror of an operation. Children relieved of fear, bear cocaine anaesthesia as well as adults.

Reclus, who reports 7,000 operations under cocaine anaesthesia without a death, insists on the observance of the following rules :—

1. Never use a stronger solution than 5 per cent. externally or 1 per cent. hypodermically.

2. Always have the patient recline during the administration of the anaesthetic and not get up for half an hour after.

3. Always have the patient eat and drink something before rising.

It is a well established rule that only fresh solutions should be used. The solution should be free from sediment and used at a temperature of about 100 degrees.

Under most conditions, the milder solutions are not only safer but will produce analgesia quicker, more profound, and over a wider area than the stronger ones.

The formula that the writer has found most useful in general practice, is :—

Cocaine hydrochlorate, gr. $1\frac{1}{8}$.

Sodium chloride, gr. 4.

Boiling water, one ounce.

This makes a $\frac{1}{2}$ of 1 per cent. solution, and this strength Means has found most useful for minor or major work. In operations of any consequence, one may add sufficient adrenalin to make a 1 in 20,000 solution, taking the commercial solution of Parke, Davis & Co., 1 in 1,000, as the unit. Adrenalin aids the analgesic effect of the cocaine, antidotes its lethal action and controls capillary hemorrhage.

The field of operation, whether for minor or major work, should be prepared with the utmost care.

The antidotes to cocaine are morphine hypodermically, or ether and nitrite of amyl by inhalation. As a preventive of systemic effects, whiskey is an excellent agent, given twenty or thirty minutes before administering the cocaine. The most valuable antidote and, at the same time, an aid to anaesthesia is morphine. The writer makes it a rule to give $\frac{1}{4}$ gr. of morphine fifteen to twenty minutes before beginning an operation of any magnitude.

Cocaine will never supplant general anaesthesia, but when its possibilities are appreciated it will be employed much more extensively than at present.

DIABETIC GANGRENE.

In the *Detroit Medical Journal*, August, Streat. E. Galbraith presents a paper with the above title. In the treatment of gangrene occurring in diabetic subjects, it is often difficult to decide just when expectant treatment should give way to radical measures.

If the disease does not threaten the use of the affected member and the patient's condition is good, remove only the parts involved.

If the disease threatens the use of the affected member and the patient's general condition is good, do an amputation high above the upper limit of the disease.

If the patient's condition is not good, treatment must be palliative until the general condition is improved, then amputation performed. If the condition cannot be improved, then operation is contra-indicated.

Operations under local anaesthesia, as cocaine, or freezing mixtures, should be avoided, as the tissues are almost sure to necrose. The anaesthetic must be carefully selected, as anaesthesia is at best but poorly tolerated by patients suffering from diabetes.

In each case the clinical manifestations must be carefully observed, and a careful chemical and microscopical examination of the urine, and examination of the blood made.

The prognosis of operations on diabetes may be said to be poor, but if the patient be brought to the table prepared, the urine containing the

minimum of sugar, and free from acetone and diacetic acid, and the operation be done expeditiously, to shorten as much as possible the period of anaesthesia, and care be taken to secure flaps with abundant blood supply. the danger of shock, coma and recurrence will be much lessened, and the results more satisfactory to the patient and the surgeon.

EXCISION OF THE THYROID IN GRAVES' DISEASE.

In the *Brooklyn Medical Journal*, August, M. Figueira considers that a careful review of the pathology and causation of Graves' disease justifies the following conclusions :

In neurotic subjects especially, emotional and other nervous influences may cause changes in the nervous centres capable of influencing distant organs and initiating in them morbid processes.

In this way, the centres in the medulla are affected in Graves' disease, and, as a result of this affection of the medulla, the characteristic symptoms of the disease are developed.

The changes so initiated in the thyroid gland cause an hypertrophy of its glandular tissue and an increase and alteration of its secretions.

This increased and vitiated secretion constantly pouring into the blood as a tendency to perpetuate and aggravate the other symptoms of the disease, such as tachycardia and exophthalmos, as shown by clinical experience with thyroid extract and by the improvement of these symptoms after resection.

Finally, the operation of resection of the thyroid gland is justified, not as a means of curing the disease, but to remove a cause that keeps up the symptoms of the disease and prevents nature and science from relieving conditions of the nervous system forming the origin and cause of the disease.

GYNAECOLOGY

Under the charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

A SECOND CASE OF PUERPERAL ECLAMPSIA SUCCESSFULLY TREATED BY RENAL DECAPSULATION.

By George M. Edebohls, *Boston Medical and Surgical Journal* June 2nd, 1904.

Dr. Edebohls a year ago recorded a case in which he had performed decapsulation of the kidneys in a case of eclampsia in which the convulsions recurred 46 hours after delivery. Subsequent to the operation there were no further convulsions and the patient made an uneventful recovery.

He now records a case where he has performed the operation two days before delivery with most brilliant success. The following is, briefly, the history of the case:—

The patient, a primipara of 20 years of age, about the 38th week of the pregnancy complained of specks before the eyes and dizziness. An examination of the urine revealed a slight trace of albumin. The eye symptoms became gradually more marked till eight days later coma and complete blindness developed. In spite of active treatment convulsive twitching was noticed a few hours later. The abdomen was of unusual size and twins were suspected. The lower limbs, abdomen and back were extremely dropsical. Foetal movements were present, the cervix was closed and there were no uterine contractions. In 24 hours but 360 cc. of urine had been voided, containing four-tenths of 1 per cent. of urea.

The operation of renal decapsulation was immediately performed as being the most certain way of increasing the output of urea. Both kidneys were found enlarged, the capsules being "thick, strong and loosely gathered or wrapped" around the kidneys. The kidney surfaces did not bleed, and presented after removal of the capsules a "dirty, grey turbid, sluggish and stagnant appearance." The operation took 45 minutes to perform.

Almost complete suppression of urine followed the operation for 24 hours, when the urine began to flow freely, 1000 cc. being drawn by catheter and a great deal more being voided in the bed during the second 24 hours. The sight improved, and restlessness disappeared. Labor set in 48 hours after operation, the onset being attended by a slight convulsion, which was succeeded later by two attacks of twitching. After three hours the cervix was found sufficiently dilated, forceps were applied to the presenting head and a male child delivered. The second child also presented by the head and was delivered by forceps. The first lived but the second died soon after birth. The placenta were delivered without difficulty.

The patient slept for most of the 24 hours after labor and awoke with a clear mind. During the four or five days succeeding delivery there was a "perfect deluge of urine," the quantity of solids and urea contained being simply enormous. At the end of a week the daily excretion of solids and urea returned to about normal. The patient nursed her baby and three weeks after delivery was able to leave her bed. Four months after the operation the general condition of the patient was excellent, and an examination of the urine gave the follow-

ing results: Total quantity in 24 hours, 1,950 cc. Specific gravity, 10.12; total solids, 54.52 gm.; total urea, 21.45 gm. No albumin; an occasional hyaline cast.

THE TREATMENT OF GALL STONES.

In a report of the meeting of the Amerian Gynæcological Society held in Boston in May, it is mentioned that Dr. George M. Edebohls, of New York, had occasion at one time to operate on a woman who presented marked dyspeptic symptoms. In addition, she had movable kidney, chronic appendicitis, and induration in the region of the gall bladder. He anchored the kidney, removed the appendix through a lumbar incision, pulled the gall bladder into the lumbar wound, and found a stone about four or five centimeters in length, pear-shaped, and nearly filling the gall bladder. The attending physician was positive that the gall bladder did not produce symptoms of stone in it. He would not let him remove the stone. A year later he opened the woman's abdomen for some other condition, making an incision near the gall bladder. He investigated the gall bladder, found it was perfectly healthy, and that the large stone had either passed or had been dissolved. The treatment after the previous operation consisted of the use of olive oil for about a month, and whether this had anything to do with the passage of the stone, he did not know. At any rate, the stone had disappeared and had left no trace of its former existence.

Dr. R. Stansbury Sutton, of Pittsburg, said that gall stones did not always produce symptoms demanding or justifying resort to operation. If they were encountered during the course of another operation, they had better be removed. There was a remedy, however, which obviated the necessity, in some instances, of surgical intervention, namely, kolalin. He had used kolalin in dozens of cases in which he had held operation in abeyance, and did not have to operate subsequently.

PUBLIC HEALTH AND HYGIENE.

Under the charge of CHARLES HODGETTS, M.D., C.M., L.R.C.P., ED., Secretary to the Provincial Board of Health for Ontario.

THE UNITED STATES SOCIETY FOR THE STUDY OF TUBERCULOSIS.

The inaugural meeting of this new association was held in Atlantic City on June 6th, Professor Osler, of Johns Hopkins University, presiding, and Dr. Jacobs, of Baltimore, officiating as secretary.

The Association will contain those officially connected with leading institutions for the care of consumptives in the United States.

Dr. E. L. Trudeau, Saranac, was elected president, and a board of directors, consisting of thirty members, was chosen. This Society will co-operate with foreign associations established for similar purposes.

THE PREVENTION OF VENEREAL DISEASES.

At the Conference of State and Provincial Boards of Health held in Washington, D. C., January 2nd and 3rd last, Dr. Fred. C. Valentine, New York City, read a paper dealing with the precautions that are necessary to be taken to prevent the spread of venereal diseases. He submitted the following which, in the form of a pamphlet, should be placed in the hands of all physicians for distribution to those suffering therefrom.

COMMUNITIES WITHOUT HEALTH DEPARTMENTS IN THE CRUSADE AGAINST TUBERCULOSIS.

In a very interesting paper entitled, "Communities without Health Departments in the Crusade Against Tuberculosis," read before the Scranton Society for the Prevention and Cure of Consumption, Mr. Laurence F. Flick, director of the Phipps Institute, Philadelphia, says, among other interesting things, "tuberculosis can be cured in any climate. All that is necessary is life in the open air, proper food, well-disciplined conduct, and, in more advanced cases, properly directed rest and exercise. People who can command these things in their homes can be cured within homes. People who cannot command them should be treated in sanatoria. Most people can be treated better in sanatoria than in their homes.—*New York Medical Journal and Philadelphia Medical Journal, June 16th, 1904.*

"As a rule the poverty, helplessness and distress of such people and of their families are great. Provision should be made for separate treatment of early stage cases, middle stage cases and advanced stage cases, and something should be done for those who are dependent upon a stricken down bread winner.

"For some years to come communities which desire to enter upon the crusade against tuberculosis will first have to train their experts. One of the best channels through which education can be carried on in the prevention of tuberculosis is the dispensary. Contaminated houses are a prolific means of spreading tuberculosis. A house which has been inhabited by a consumptive who has disregarded preventative measures may give the disease to a subsequent occupant. The simpler and easier the prevention of tuberculosis is made for the poor and ignorant the more likely it is to be carried out.

"Hospital buildings for their accommodation need not be elaborate or ornamental. The simplest construction may be used with plain equipment. In concluding, the author directs attention to the Act now in force in Ontario, whereby any municipality, which establishes an institution, could draw from the province or state a certain per capita for maintenance, and recommends its adoption in Pennsylvania,"

ANTITYPHOID INOCULATION.

The B. M. J., May 28th, states that a committee shall be appointed by the Army Council of Great Britain to consider the whole subject of Antityphoid Inoculation from the broadest point of view. The names of the members of the committee are a sufficient guarantee that the work which has already been begun will be most thorough in character.

NOTES *RE* TUBERCULOSIS.

R. Thelin, visiting nurse for tuberculosis, reports in the May number of *Johns Hopkins Hospital Bulletin*, upon three months work. It is the duty of the nurse to visit the patients treated in the separate clinics held in the Hospital Dispensary for these cases. Some 67 patients were visited during three months, December, January and February 245 visits in all being made—the nurse amongst other duties acts as an instructor to the patients and relatives as to the precautionary measures each should take to prevent the dissemination of the disease. Milk and eggs were supplied where, through financial causes, the patients, some 28 in number, were not able to secure the same. The nurse has further been enabled to bring others of whom she had reason to suspect their being affected to the Dispensary for examination and subsequent treatment.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

TRACHOMA IN THE PUBLIC SCHOOLS OF NEW YORK.

Dr. Wm. H. Carhart's report states that the prevalence of contagious granular lids, or trachoma, in New York City Public Schools was brought to notice by a preliminary inspection of two schools, in which the percentage of communicable eye disease was 19.2 in one, and 15.5 in the other. Investigation into other schools disclosed 6,690 cases of contagious conjunctivitis among 57,450 children, of whom 2,326 had pro-

nounced trachoma. These statistics led to the adoption of a systematic and rigid inspection of the eyes of all public school children. The rush of cases which these regulations caused to present themselves at the various eye clinics and dispensaries was so great that all the existing institutions found their facilities much overtaxed. Under these circumstances there arose a demand that the Board of Health should establish its own hospitals and dispensaries for trachoma. In December 1902, two clinics were established by the Board and two wards of twelve beds opened and a staff of oculists and trained nurses appointed. Within a few weeks the capacity of the new Trachoma Pavilion was taxed to the uttermost, 24 operations a day being the rule, the clinics handling from 900 to 1,000 patients a day. In six months the number treated by operation was 3,017 and without operation 9,820, and the number of visits 64,086. Anesthetics were administered over 3,000 times without an accident, combined ether and gas being used. This is but the beginning of the crusade against Trachoma in Greater New York. While it is true that it afflicts the school children of the tenement house district chiefly, still it is a menace to every child of school age. Buffalo has also had an epidemic, over a hundred cases occurring among the employees of the Lackawanna Steel and Iron Company.

Chronic Trachoma is so insidious in its nature that it is easily carried everywhere by those who are careless and ignorant. From New York it has spread over the country, being carried by immigrants and others. The inspection at the port of debarkation is now so strict that many new cases are not liable to enter the country.

OCULAR LESIONS OF SCARLET FEVER.

Dr. Ellet O. Sisson, of Keokuk, Iowa, in *Medical Fortnightly*, of Aug., 10, describes ocular lesions following or concurrent with scarlet fever. He states that uræmic amaurosis occurs more frequently than other lesions, the blindness comes on suddenly, and becomes complete within a few hours. After one or more days, there is usually restoration of vision. Simultaneously with the attack of visual disturbance other nervous symptoms exist, such as headache, vomiting, dyspnœa, loss of consciousness and convulsions. The fact that reaction of the pupil to light is preserved, in spite of complete blindness, proves that the location of the affection cannot be in the eye or optic nerve, but higher up in the brain which is poisoned by the excretory matters contained in the blood. No ophthalmoscopic lesions were detected and the blindness gradually cleared off. Forster states that in all cases albuminuria was present.

Purulent inflammation of the vitreous or suppurative hyalitis is the product of metastatic choroiditis, which sometimes follows in the wake of scarlet fever. A yellowish reflex is to be seen in the pupillary space, retraction of the periphery and bulging of its pupillary border. Tension is diminished and there may be a pericorneal zone of congestion. When pus in the retina is circumscribed the symptoms at first glance resemble those of glioma?

Phlegmon of the orbit is of occasional occurrence. It is of metastatic origin and generally acute and monolateral. It is attended by constitutional disturbance, exophthalmos, swelling and œdema of the lids and the pointing of the abscess. Permanent loss of vision may follow pressure on the optic nerve.

Thrombosis of the cavernous sinus is a rare complication, only 182 cases being on record. Of this number, 14 recovered. The lids and conjunctiva swell up and the eyeball protrudes. The veins of the retina are seen by the ophthalmoscope to be enormously distended, owing to the fact that they discharge their blood into the cavernous sinus. The œdema present is an important diagnostic sign. A further point of difference lies in the fact that the thrombosis often passes over to the other side.

Wells and Germain report a case that was operated upon the cavernous sinus being exposed and drained. The patient died.

Albuminuric retinitis also occurs after scarlet fever, but is not frequent. The prognosis is more favourable than in this complication of Bright's disease, but partial optic atrophy is often observed.

The sight can also be affected as the result of scarletina, without the presence of albuminuria or any evidence of kidney disease, such as thrombosis of the central artery of the retina.

Pflüger has observed papillo-retinitis after scarlet fever without kidney affection; Betke hemiplegia. Leber reports a case of a boy who became blind without ophthalmoscopic signs and with normal urine. Leber seems to regard this peculiar case as somewhat analogous to the post-diphtheritic affections of nerves. Occasionally accommodative asthenopia follows scarlet fever and is most obstinate.

Fuchs states that suppurative choroiditis may follow scarlet fever and is of metastatic origin.

As a result of this study of the eye lesions following scarlet fever, Sisson feels justified in reaching the following conclusions: 1st. In view of the fact that scarlet fever is one of the commonest exanthems and that the majority of eye lesions occurring in connection with it, are of a serious nature or involving the loss of vision, greater attention should be paid to them than they generally receive.

2nd. That if the operation on the cavernous sinus can be made without grave danger to the patient, and with a chance of lessening the mortality, as is claimed by the operators, such an operation is justifiable and should be performed.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

DISEASES OF ETHMOIDAL AND SPHENOIDAL CELLS CAUSING LARYNGEAL AFFECTIONS AND OZÆNA.

John Mackie, M.D., Nottingham, read a paper at the recent meeting of the British Medical Association. Briefly, his conclusions respecting nasal suppuration are :—

1. That nasal suppurations, for the most part, are either in direct continuity with adenoids and the naso-pharyngeal catarrhs of childhood, or are set up, later in life, in noses where drainage has been interfered with by the deformities and hypertrophies left by these conditions of early life.

2. That the ethmoidal is the sinus most frequently involved.

3. That the frontal and sphenoidal disease is almost invariably due to extension from the ethmoid, and rarely requires individual attention in treatment, provided the ethmoid has been thoroughly dealt with and drainage established in the middle meatus.

4. That antral disease, though occasionally due to diseased teeth, is far more often caused by defective drainage in the middle meatus.

5. That by bearing 3 and 4 in mind the treatment of frontal and central disease is made easier, and the heroic surgical proceedings now being advocated are seldom necessary.

6. That disease of the posterior sinuses is the main factor in an ordinary ozæna, and a very frequent cause of chronic catarrhal conditions of the pharynx, larynx, trachea and bronchi, associated with cough, purulent expectoration, and, at times, an oozy type of hæmoptysis. Such conditions are often mistaken for and treated as phthisis. Of this last, the author has some striking instances.

PRIMARY ULCERATION OF THE TONSIL.

Thomas J. Harris, *American Medicine*, July 23, 1904, emphasizes the great value of bacteriological examination in all membranous and ulcerative conditions of the tonsils. He says there occurs several primary forms of ulceration of the tonsil, bacterial in origin, which can be and, doubtless, have been mistaken for the graver conditions due to diphtheria. Almost irreparable harm may result in the patient from a false diagnosis of the latter disease.

EARLY SYMPTOMS OF PRESSURE UPON THE VAGUS AND RE-CURRENT LARYNGEAL NERVES.

David Newman (*Jour. Laryngology, Rhinology and Otology*) says, serious disease within the thorax, of either malignant or aneurismal nature, may be first intimated by laryngeal or other respiratory disturbance. The patient generally believes himself the victim of some purely throat affection, the symptoms, however, proving to be those of pressure upon the nerve trunks. He has obtained from his observations those general results: (1) Sudden and paroxysmal dyspnoea, accompanied by laryngeal stridor, is, in some cases, one of the earliest symptoms of interference with the innervation of the larynx by pressure of an aneurism within the thorax or a mediastinal tumor. This leads to an interesting discussion of the palsies of the adductor and abductor-muscles of the larynx, with reference to Semon's law and other experimental investigations. (2) The characteristic features of the cough, in cases of pressure on the nerve fibres supplying the larynx, are often easily recognized and, in many cases, are so distinctive as to lead the trained observer to suspect at once the nature of the malady causing it. The cough, hoarse and imperfect, is essentially a paralytic phenomenon. (3) In cases of recurrent laryngeal paralysis, the speaking voice may be but little altered from the normal, because of the power of the muscles on the healthy side to compensate for the defective action of those of the paralyzed side, while the alterations of the voice are less characteristic and, hence, less valuable than the other symptoms described as factors in diagnosis, yet, when taken in conjunction with the stridor and imperfect cough, they materially assist in forming an early diagnosis of aneurism or of mediastinal tumor.

X-RAY THERAPY AND SKIAGRAPHY.

Under the charge of JOHN McMASTER, B.A., M.D., C.M., Toronto.

X-RAYS IN SPLENIC LEUKAEMIA.

In the July issue of the *American Practitioner and News*, Dr. J. T. Dunn reports on the use of x-rays in Splenic Leukaemia. As it is such a fatal disease, resisting all forms of treatment, a brief outline of the case is given. The patient is 26 years old and has one child 16 months old. The previous health has been good. The tumour began to appear shortly after the birth of her child. Repeated blood examinations established the diagnosis. Her health grew rapidly worse, there being marked emaciation. Operation was refused by her and she tried "magic healing," without result. When x-ray treatment was begun, her condition was as follows: weight, 110 lbs., muddy complexion, face and

limbs very thin, extreme debility, abdomen distended with growth to size of a woman at full term, heavy offensive sweats, amenorrhœa, urine normal. The mass extended down to within two inches of the pubic bones and one and a half inches to the right of the median line, reaching up to the diaphragm, slightly movable, very hard but not painful. The intestines were displaced to the right. It was very evidently the spleen from the position and previous history. Treatment began on Dec. 17th, 1903. A hard tube was used, and exposures were made over the spleen, at eight inches distance, for ten minutes. Newman's Glycero-Phospho-Calisyaya was given internally. Seventy-five treatments were given in 91 days. After two weeks, the sweating began to abate and the appetite to increase, when 36 treatments were given, the spleen was greatly reduced in size and quite soft, the appetite was splendid, and the sweating had entirely ceased. At the end of the first month she had gained $9\frac{1}{2}$ lbs. in weight, while the tumour had diminished even more than this. Hope took possession of the woman and her spirits revived and she became very cheerful and gradually resumed her active duties. A respite from treatment for three weeks was given at the end of 91 days. Her menstrual function returned during this interval, and her condition was excellent. She weighed $119\frac{1}{2}$ lbs. and, although she had the measles, she came through the attack as well as if she had not been the victim of this fatal disease.

Under date of June 10th, 1904, following report on blood condition by Dr. John E. Hays, which is interesting to compare with his report dated October 6th, 1903, about eight and one-half months prior.

October 6th, 1903 : Red, 4,600,000 ; leucocytes, 128,000 ; color index, .65 ; proportion red to leucocytes, 35.1. Red cells : Shape, irregular ; size, irregular ; nucleated, none. Leucocytes : Large lymphocytes, $8\frac{1}{2}$ per cent. ; small, $5\frac{2}{3}$ per cent. ; poly-morpho-nuclear, 39 per cent. ; eosinophile, $7\frac{2}{3}$; myelocytes, 38 per cent. Remarks : Myelocytes, very numerous. Hemaglobin, 60 per cent.

June 10th, 1904 : Red, 5,544,000 ; leucocytes, 37,000 ; color index, .65 ; proportion red to leucocytes, 149 : 1. Red cells : Shape, irregular ; size, irregular ; nucleated, none. Leucocytes : Large lymphocytes, 5 per cent. ; small, 10 per cent. ; poly-morpho-nuclear, 65 per cent. ; eosinophile 5 per cent. ; myelocytes, 15 per cent. Remarks : Myelocytes not as numerous as in former analysis. Hemaglobin, 65 per cent.

She is still under treatment, and up to date has taken 129 treatments. The spleen continues to decrease in size. The menstrual function is normal, and the patient is anxious to be dismissed, as she feels perfectly well.

Treatments will be continued till the normal ratio exists between the red and white cells.

PROVINCE OF QUEBEC NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Montreal.

The first report upon the compulsory registration of births in Montreal has been presented by Dr. Laberge to the Hygiene Committee, and indicates a very much improved state of affairs in this particular ; whereas under the old conditions the only means of gauging the number of births was by collecting the baptismal returns ; every doctor is now compelled to register the birth within forty days. There has been some little difficulty in this connection and the chairman of the committee has proposed an amendment, which will make the father responsible for the registration. Section 1 of the amendment ordains that the persons required to give information for the registration of a child are : the father and mother, and in default of these, the occupier of the house in which the child is born, or each person present at the birth, and the person having charge of the child. Whether the returns in connection with this by-law will be as complete as under the present ruling remains to be seen, certainly it is a much more reasonable division of labor as may be judged by the following figures. Of the 500 births registered in the past month and a half, 435 were reported by physicians, the latter being 111 in number, or an average of almost four births to be reported by each attending medical man in this short space of time, a greater number than the average father would have to report in a lifetime. Of the remaining 65, one was sent in by a mid-wife and 64 by relatives.

Dr. Laberge reported in regard to the establishment of a bacteriological laboratory, and pointed out the urgent need of such a department, not only for the bacteriological examination of water, but of milk. He also stated that the increase of typhoid fever during the past few weeks was one of the most cogent reasons for haste in this matter, and added that but very little work would be required in order to put the laboratory in such condition as to be independent of the Provincial Laboratory, to which they had been so much indebted in the past. A grant of \$3,000 was asked for this purpose, and also to pay for the analysis of the city water supply. Dr. Ruttan, of McGill University, Dr. Bernier, of Laval. Mr. Hersey and Dr. J. E. Laberge will take the work in hand, and after one year will present a joint report from four or five analysis per week from the St. Lawrence River, the intake, the aqueduct, and the two reservoirs.

The report of Dr. McCarrey, recommending that the butchers should be prevented from exposing their meat to the open air and selling it on

Jacques Cartier Square, has been favorably considered. He showed that bakers and grocers were not allowed to expose similar classes of goods in this way, and he saw no reason why butchers should be exempt. As a result of this report, a by-law was drafted enacting that no article used as human food should be exposed for sale outside any store or any other place of business in the city, with the usual penalty of fine or imprisonment by the recorder.

Another point of practical interest to the health of the city was brought up by a letter from one of the city ice dealers, who requested that at the earliest possible date the limits for the harvest of suitable ice should be mapped out, as last winter a number of dealers had a large quantity of ice condemned from being collected at places not considered safe. After some discussion it was thought best that all the ice dealers should be requested to submit plans of the points where they purposed harvesting ice, and that these should be approved of or condemned according to the judgment of Dr. McCarrey.

According to a report completed at the city hall in regard to vaccinations in Montreal the progress of this preventive has increased very materially from 1901 to 1904. In 1901 there were 26,374 scholars vaccinated, while in 1903-1904 the total amounted to 31,388, thus showing that this little operation has much less opposition to contend with than formerly. In 1901, when it was decided that all scholars must be vaccinated, hundreds of children left the schools rather than submit to the ordeal, but as time went on the prejudice gradually became less marked and at present there are few children in the city who do not bear a good mark.

The past year has been one of great activity and progress in matters of civic hygiene, and it is encouraging to see the increase of interest manifested by the general public in the health of the community as shown by the vaccination records and the number who have joined the crusade against tuberculosis.

A great deal of very interesting reading matter is to be found in the last report of the meeting of Governors of the Quebec College of Physicians and Surgeons. The many and curious wiles practised by the unregistered student for obtaining a license, the names of those irregular practitioners who have been prosecuted for lack of qualifications, and the number of those in arrears with their college dues are all set out in black and white. The Taschereau bill, with its methods of making doctors by an act of parliament, with an explanation for the compromise which had to be accepted, is also fully discussed ; and, after reading the report, one is forced to the conclusion that as the law now stands the College of Physicians and Surgeons has very little power to

prevent another similar attempt at its authority. Under the heading of Nomination of a Provincial Drug Inspector, there is a timely resolution passed by the board which is worded as follows : Resolved that the attention of the Dominion Government be called to the abuses, the serious accidents and numerous losses of life, resulting from the actual sale of prepared and patent medicines, that the Government be requested to have Parliament pass the required legislation in order to have an effective control over the sale of those medicines and preparations. That in the opinion of the College of Physicians the sale of any such preparation should not be tolerated unless every package or bottle bear the name of the preparation and the quantity of each dose, also the maker's name, that of the seller, and price.

In the same department it was unanimously adopted that the Provincial Government be memorialized to appoint a Drug and Medicine Inspector, under the control of the board of health of the Province, with the necessary powers to fulfil his duties and to enforce the provisions of Act 4039 b. of the Revised Statutes.

The medical faculties of McGill, Laval and Bishop's College will have once more entered upon their session's work by the time this appears in print. Indications are that the medical profession will not be less sought after than formerly, if one may judge by the advance lists of registrations the freshman year in each university will be as large as ever. A few changes will be noticed on the staff of McGill University, notably the absence of Dr. Halsey and his replacement by Dr. Scane, and the football field, gymnasium and dissecting room will shortly mourn the loss of Dr. Tait Mackenzie. The hospitals also have new blood infused into the house staff, and graduates of last year are now broken into hospital ways, ready to detect the shortcomings of the next generation of doctors and teach them the way they should go. At the Royal Victoria Hospital the staff rejoiced in again seeing the familiar figure of Dr. James Stewart walking through the wards, but regret that he is again compelled to desist from his work for a time owing to ill health.

At the General Hospital the internes are under the direction of Dr. R. P. Campbell, who has returned from Germany to take the position of Medical Superintendent.

At Quebec the Jeffrey Hale Hospital is under the charge of Dr. Rankin, who has replaced Dr. Carter as Medical Superintendent. Dr. Carter, who intends to practise in the city, has received an appointment as Pathologist, and also has charge of the x-ray department of the hospital.

MEDICAL SOCIETIES AND GATHERINGS

THE CANADIAN MEDICAL ASSOCIATION.

23rd August, 1904.

The 37th Annual Convention of The Canadian Medical Association met on 23rd August, 1904, in the City of Vancouver, B. C. Although the Association met this year in the Province of British Columbia the attendance was large, and the interest in the various papers appreciative. The local Committee had an excellent programme prepared, both on the scientific and social aspects of the convention.

THE CONVENTION HALL.

O'Brien's Hall where the sessions were held had been elaborately prepared for the Convention, and was well worth a visit. The stairway had been carpeted and extra seats placed in the large hall to accommodate the visitors. The lesser hall had been converted into a hall of exhibits. A large space was occupied by Messrs. Chandler & Massey, of Toronto, with their display of surgical instruments and appliances. Messrs. D. K. Wampole & Co., had a very neatly arranged display of their medicines, and Appleton's and Lippincott's both made a fine showing of medical books. Mr. J. H. Chapman, of Montreal, also had a large assortment of surgical instruments of French and English make, on view. In the hall-way there was a medicinal food exhibit and just across from it the Deimel Mesh Underwear Co., displayed its goods. This portion was in charge of Dr. J. C. Cracknell of Montreal. There was an X ray outfit by Heinze & Co., of Boston, Mass. The expert who had charge of this remarkable machine gave several exhibitions before the Association. Mr. J. J. Dougan also installed an exhibit of the many valuable medical works for which he is agent. A pleasing and very much patronised exhibit was that of medicated foods which were served out freely to all comers by neatly dressed waitresses at the head of the stairs. These foods were the product of a Montreal firm, and are a credit to Canadian enterprise.

All arrangements possible had been made for the comfort and convenience of the delegates. A private writing-room had been set off. At the head of the stairs on the second floor were placed the desks of the Secretary and the Treasurer, and there was a post office box, a telephone, and a stenographer and typewriter ; and to the rear of these was a reading and smoking room. On the whole the arrangements reflected great credit on the President, Dr. Tunstall, and the local Secretary, Dr. Brydone-Jack, and those who have so faithfully assisted them in their labors.

Among those who were guests of the Association may be mentioned Mr. Mayo Robson, of London, Eng.; Dr. J. W. Mayo, of Rochester, Minn.; E. C. Dudley, of Chicago; Dr. Sinclair, of Manchester; and Dr. McGillivray, of Edinburgh.

DISTINGUISHED VISITORS WELCOMED.

In opening the meeting Dr. Tunstall stated that they had several distinguished guests among them, and he would be pleased to have their names introduced to the meeting.

The first one to be introduced was Dr. E. C. Dudley of Chicago.

Dr. Dudley spoke of the pleasure it had given him to attend the meeting of the Provincial Medical Association of British Columbia three years ago, and said he felt sure that that pleasure would be more than repeated now.

Dr. J. W. Mayo was introduced by Dr. McKid of Calgary. Dr. Mayo said he was pleased to be present at such a gathering no matter where it might be held, as their profession recognized no international boundaries.

CONSTITUTION CHANGED.

After the adoption of the minutes and the reading of the General Secretary's report, Dr. Small, of Ottawa, moved a resolution to introduce a new by-law into the constitution, empowering the Provincial Medical Associations each to appoint three members who, with the President, should form an Executive Committee.

This resolution was adopted with very little discussion.

ARRANGEMENTS FOR ENTERTAINMENT.

Dr. Brydone-Jack, Chairman of the Committee on Arrangements, then reported to the delegates on the provisions that had been made for their pleasure and comfort. He stated that they would hold occasional Masonic meetings for members of that fraternity. He also read a letter from the Secretary of the Lawn-Tennis Club, offering the delegates the freedom of the grounds, and told of the entertainments and excursions which had been provided for the visitors.

CIVIC ADDRESS OF WELCOME.

Mayor McGuigan, M.D., was received with applause on going forward to welcome the visitors. He said we had here some of the finest scenery in the world. He spoke of the value of the Convention in carrying to the Eastern part of the Dominion a knowledge of what the West really was. He told them there was a valuable organization in the City known as the Tourist Association, whose members would be glad to show them all that was to be seen.

He noticed that the American Medical Association was going to meet in Portland, Oregon, next year. He was sorry that the two bodies had not met on the Coast this year, but as it was he trusted they would both do

much to dispel the false notions that prevailed in the East as to conditions in the West. He had just come from a trip to the East and he knew there was a great deal of ignorance about the Coast.

He spoke particularly of those physicians who were here from the Old Land, and of the tidings they would carry back with them, and it was in many ways a good thing for the medical profession and for the country that this meeting should take place here.

Speaking from a medical standpoint, he said that there was even a higher standard of professional ethics here than in the East, and instanced the entire absence of professional advertising. He stated that there was to his knowledge no illegal practitioner either in Vancouver or Victoria. In conclusion he offered them the freedom of the City, and as Chairman of the Police Commission, he guaranteed that they would find the police and the City officials ready to give them all the information and assistance they might need.

RESOLUTION *re* TUBERCULOSIS.

The following resolution was then moved by Dr. R. E. McKechnie of Vancouver, and seconded by Dr. R. E. Walker of New Westminster :

"Whereas tuberculosis has been positively proved to be an infectious disease ;

Whereas the patient is the focus of infection and is capable of infecting, and does infect dwellings, clothing, and private and public places generally ;

Statistics already available prove that compulsory notification with educational oversight of the patient and those under exposure to the contagion, together with disinfection of infected materials and places, has resulted in a diminution of the number of cases ;

Whereas such action in the Dominion of Canada lies with the various Provincial Governments ;

Therefore be it resolved that the various Provincial authorities be and are hereby urged to at once take the necessary steps to bring these suggestions into effect, and that the Secretary be requested to forward copies of this resolution to the Secretaries of the various Provincial Boards of Health."

Dr. C. J. Fagan, of Victoria, Provincial Health Officer, spoke briefly in favor of the resolution. The urgent necessity for some action had encouraged him to take up the matter.

PAPER ON PATENT MEDICINES.

Owing to the non-arrival of some gentlemen who were down for addresses, Dr. Fagan was next called upon and read a paper on Patent Medicines" which gave rise to a great deal of discussion. Whilst all seemed to agree with his views, there was some difference of opinion as to how

the evil should be treated. The thanks of the Association were moved by one member, who declared that the use of patent medicines was a growing evil and should be dealt with. He said that he understood that at the last session pressure was to have been brought upon Sir William Mulock to introduce some measures to check the spread of this evil by pamphlets sent through the mails, but nothing had been done. He was pleased, however to notice that Dr. Sullivan had brought up a resolution in the Senate that the authorities should take this matter up and deal with it.

Another doctor suggested that it should be brought before the Minister of Inland Revenue that the sale of these medicines vastly exceeds that of alcoholic stimulants from which the country derives a great revenue, and a greater revenue could be derived by taxing these proprietary medicines.

It was finally resolved that Dr. Fagan and such gentlemen as he wishes to associate with him should be appointed a Committee to draft a resolution on this question of patent medicines.

GREETINGS FROM NEW YORK.

At the opening of the afternoon session Dr. Tunstall read a telegram from Dr. Nelson, of New York, regretting his inability to attend, but wishing Canada and the meeting success.

WELCOME FROM PROVINCIAL COLLEGE OF SURGEONS.

Dr. Davie of Victoria, Vice-President of the College of Physicians and Surgeons of British Columbia, said that in the absence of the President, it gave him much pleasure to welcome the visitors. This was the first meeting of the kind in the Province, but they had the same interests and studies in common.

ADDRESS ON MEDICINE.

Dr. R. E. McKechnie then gave an "Address on Medicine," which contained a very interesting sketch of the progress of medical science from the earliest ages. He also gave an interesting account of his experience with a rival "medicine man" among the Indians on the Coast. The concluding part of the address dealt with the progress of medicine in recent years. At the conclusion of the address a vote of thanks to Dr. McKechnie was moved by Dr. Lafferty of Calgary and seconded by Dr. England, Montreal. Before putting the motion the President explained that the address redounded the more to the credit of Dr. McKechnie, because less than two weeks ago he had stepped into the place of a gentleman who had been set down for it; but was unable to attend. The vote of thanks was then heartily carried.

EXHIBIT OF NEW COLOR TEST.

As several gentlemen who were down for addresses had not arrived, an exhibition of "The new color test apparatus" was given by Dr. Glen

Campbell. Mr. Mansfield, Fleet Surgeon on H. M. S. Grafton had been billed for this, but as his ship had been called away to Honolulu Dr. Glen Campbell had kindly consented to read the paper he had prepared and to work the color test.

The machine in question is shaped something like a camera with two knobs and different eyeholes in front, but is closed up behind, and is meant for testing the eyesight of candidates for the Navy and Army.

OTHER PAPERS.

When the meeting was again called to order a paper on "Movable Kidney," was read by Dr. Kenneth McKenzie of Portland, Oregon.

Dr. Robert H. Craig of Montreal, followed with a paper on "Case Reports."

Dr. Hackett and Dr. Irvine both of Montreal, spoke briefly on Dr. Craig's paper, both congratulating him on the success of his operations.

THE CONVERSAZIONE.

The conversazione given by the Canadian Medical Association at the Hotel Vancouver in the evening was a brilliant social affair. By ten o'clock there must have been fully 500 people in the large dining room of the hotel, and the hum of many voices in conversation almost drowned the strains of Harpur's orchestra, which was playing at the further end of the room. Among the many guests were the wives and daughters of the visiting physicians, and the members of the Committee on Arrangements had a busy time making introductions. Among the many guests from the City were the Mayor and several members of the City Council, and many of the City officials. There were also several representatives of the City clergy, and the legal profession was present in large numbers. That those present enjoyed themselves was shown by the cordiality and freedom from restraint with which conversation was carried on.

CONVENTION ITEMS.

It may be interesting to know that the handsome badge worn by so many of the Medical Association was designed by the worthy President, Dr. Tunstall. It is a neat heart-shaped button surmounted by a miniature of the arms of Vancouver (the Sunset Gateway of the Dominion) as a crest. Through the centre runs the golden staff of Mercury, and round the edge is inscribed "Canadian Medical Association, 1904." The button is neatly finished off in alternate stripes of white and blue and is a credit both to the designer and the maker.

That the Medical Association is growing was abundantly proved both by the report of the General Secretary and the large number of names proposed for membership yesterday.

Among the arrivals on the evening of the first day was Senator Sullivan

of Kingston, Ont. The Senator is the President of the College of Physicians and Surgeons of Ontario.

Dr. Moorehouse, one of the Nova Scotia delegates, was unfortunately taken ill while en route to the Coast. The ambulance was in attendance on the arrival of the Imperial Limited and conveyed him to the Vancouver General Hospital where it is hoped he will speedily recover.

The smoothness with which the Convention was conducted was largely due to the following gentlemen, constituting the Committee of Arrangements: Vancouver—W. D. Brydone-Jack, Chairman; F. McPhillips, Secretary. Victoria—Dr. R. E. Fraser, Chairman; H. M. Robertson, Secretary Finance; J. M. Lefevre, Chairman; J. M. Pearson, Secretary. Printing, F. T. Underhill, Chairman; G. P. Young, Secretary. Reception, O. Weld, Chairman; J. S. Conklin, Secretary. Exhibit, A. S. Monro, Chairman; X. McPhillips, Secretary.

In honor of the visitors the streets were illuminated on the first night till a late hour.

24 August, 1904.

Dr. Brydone-Jack, Chairman of the Committee of Arrangements, made several welcome announcements of entertainments and outings provided for the visitors. He stated that cheap rates had been obtained for those wishing to visit New Westminster to-day, and for those who did not wish to go, the steamer Kestrel had been retained, and they could explore the beauties of the Inlet. He also announced that all guests of the Association were to receive free tickets to the dinner at the Hotel Vancouver in the evening. He further stated that on Wednesday evening there would be a special Masonic meeting, at which members of the fraternity visiting the City would be made especially welcome. For the ladies accompanying the visitors, carriages would be at the Hotel Vancouver at 2.30 to take them round the Park.

PAPERS READ.

The first paper read was the notable address of Mr. Mayo-Robson, of London, Eng., on "Surgery." Mr. Mayo-Robson's address was vividly illustrated by a superb series of lantern slides, showing the formation of the internal organs, and was listened to with the keenest interest throughout the whole hour that it occupied, and was received with loud applause.

At the conclusion a hearty vote of thanks to Mr. Mayo-Robson was tendered by the audience.

Dr. F. J. Shepherd, of Montreal, then read a paper on "Hernia of the Bladder, complicating inguinal hernia."

The paper was followed by short discussions by Dr. A. A. Macdonald (Toronto), Dr. Meek, (London), Ont., Dr. Secord (Brantford), and Dr. Eagleson (Seattle.)

A paper on 'Moveable Kidney' was then read by Dr. K. McKenzie, of Portland, Oro. Those taking part in the discussion were Dr. R. C. Coffey (Portland) and Dr. Eccles, (London, Ont.)

Dr. S. R. Jenkins, of Charlottetown, P. E. I., then read a short paper on "Report of Hypertrophy of the Breasts."

Before adjournment Dr. Brydone-Jack announced that those who wished it might go with Dr. Underhill to inspect the septic tanks—that was if they preferred that to the lunch in the Pender Hall. There were also bowling and croquet games and lawn tennis at the Lawn Tennis Club grounds.

The Convention then adjourned for luncheon.

THE NOMINATING COMMITTEE.

The first business to come up in the afternoon was the election of the nominating committee. Drs. Brydone-Jack and Shepherd were appointed tellers, and a ballot was taken resulting as follows:—

Prince Edward Island—Dr. McLaren and Dr. Houston.

Nova Scotia—Dr. James Ross, Dr. J. B. Black.

New Brunswick—Dr. Morehouse, Dr. T. Walker.

Quebec—Dr. Shepherd, Dr. R. Craig.

Ontario—Dr. Howitt and Dr. A. A. Macdonald.

Manitoba—Dr. McArthur and Dr. Chown.

North-West Territories—Dr. De Veber and Dr. Stuart.

British Columbia—Dr. Davie (Victoria), Dr. R. E. McKechnie (Vancouver).

Dr. McGillivray, of Edinburgh, and Dr. Sinclair, of Manchester, Eng., were then introduced to the Association and welcomed by the President.

PAPERS AT THE AFTERNOON SESSION.

A paper on "Diseases of the eye" was then read by Dr. J. W. Stirling, of Montreal.

Dr. G. R. Cruikshanks, of Windsor, Ont., followed with a paper on "Therapeutic Hints from Bacteriology" giving many interesting descriptions of the actions of bacteria on animals. He was of the opinion that too much medicine was used in bacterial diseases as a general rule, and thought that the 20th century would witness a radical change in treatment.

RECEPTION AT PENDER HALL.

At 4 o'clock the meeting adjourned, most of the members going to the Pender Hall, where a reception was held, while others went for a drive round Stanley Park. The reception was quite a brilliant affair. It was attended by several hundred people, and Mrs. Tunstall and the wives of other local doctors, who constituted the Reception Committee, had a busy

time receiving their guests. The hall was handsomely decorated. The windows were treated with dark green dressing, which admitted a softened light. The roof was done in terracotta, and the electric lights were festooned with orange shades and ivy. Undoubtedly the beautiful setting of the scene did much to enhance the success of the gathering.

EVENING SESSION.

There was a large attendance at the evening session, and the Presidential address of Dr. Tunstall was listened to with great interest. Before commencing his address, Dr. Tunstall asked Dr. Powell, of Ottawa, to take the chair.

In doing so, Dr. Powell referred to the pleasure he felt at being at a meeting of the Association presided over by his old friend, Dr. Tunstall.

THE PRESIDENT'S ADDRESS.

Dr. Tunstall then read his Presidential address which appears in this issue of the Canada Lancet.

VOTE OF THANKS PASSED.

The Hon. Senator Sullivan, proposed a vote of thanks to Dr. Tunstall for his very able address. He spoke of the gratitude due to this young Province for entertaining in its midst this cultured and enlightened gathering. He spoke of the history of the Canadian Medical Association which had been first established 38 years ago. He congratulated Vancouver on securing so many visiting doctors from the neighboring States. He spoke with approval of the suggestions made by Dr. Tunstall, and said he hoped they would travel East and be taken up with enthusiasm by the profession as they went till they covered the whole Dominion. Dr. Sullivan's speech was replete with witty points and flashes of rhetoric, and was received with great applause.

The vote of thanks was seconded by Dr. Eccles, of London, Ont., and carried with enthusiasm.

PAPER BY DR. DUDLEY.

Dr. E. C. Dudley, of Chicago, then gave an address on "Gynecology," illustrated by a series of fine lantern slides. It was listened to with close attention, and at the close Dr. Dudley received a hearty vote of thanks from the audience.

THE VANCOUVER HOSPITAL.

A number of pictures of the new Vancouver Hospital building were then thrown upon the screen, and were explained to the meeting by Mr. G. W. Grant, of the firm of Messrs. Grant & Henderson, the architects of the building.

During the course of the evening session, the following announcements

were made by Dr. Brydone-Jack, Chairman of the Committee of Arrangements:—

The excursion tickets for to-day are quite free to all their guests, and the Committee hoped that every member present would take advantage of them and take their wives and daughters with them.

He announced that transportation to Victoria would be free to all members from the East. Dr. Fraser, of Victoria, said he hoped that everyone would go as there was much to show them.

MARITIME DELEGATES.

A meeting of the members of the Canadian Medical Association, who hail from the Maritime Provinces, was called at 12 o'clock. The meeting was held in the smoking-room of the O'Brien Hall and was called for the purpose of meeting the local members of the Maritime Provinces Association.

A cordial invitation was also extended by the Art & Historical Association to the visiting members of the Canadian Medical Association to visit the Carnegie Library. The interesting collection on view there was well worthy of a visit.

25th August, 1904.

Many new members were proposed and elected, and Dr. Brydone-Jack announced that the Government steamer Kestrel would be ready at the C. P. R. wharf at 2.30 to take out any who had not gone to New Westminster.

PAPERS READ.

The first paper read was that of Dr. J. W. Mayo, of Rochester, Minn., on "Tubercular Peritonitis." The fact that the Mayos have an International reputation for the treatment of tubercular diseases lent additional weight to his words, and his paper was followed with close attention.

A vote of thanks was moved by Dr. Macdonald, Brandon, and seconded by Dr. McKid, Calgary.

Dr. Davie, Victoria, discussed the paper at some length, complimenting Dr. Mayo on opening up new theories of treatment for these troublesome diseases, and praised the ingenuity of the American physicians in the methods they adopted.

Dr. J. K. Holmes, of Chatham, Ont., also spoke a few words expressive of the pleasure he had derived from listening to Dr. Mayo's paper.

Dr. Howitt, of Guelph, Ont., read a paper on "Meckel's Diverticulum, Report of Cases." During the reading of his paper Dr. Howitt had several photographs of diverticula he had treated handed round for inspection.

Dr. Mayo discussed the paper at some length. He said that in these physical freaks it often took a gravestone to teach them anything. He also said that while the lungs would stand a great deal of operation, a small intestine would stand very little.

Dr. C. W. Wilson, of Montreal, read a paper on "Results (after one year) of the Lorenz Reposition on Congenital Dislocation of the Hip," illustrated by a number of radiographs. He showed that of cases treated there had been about ten per cent., of perfect replacements, and perhaps 50 per cent., of good results.

The paper was discussed by Dr. B. E. McKenzie, of Toronto, who cited many cases of dislocated hip which had come under his own observation.

Dr. E. R. Secord, of Brantford, Ont., gave an address on "Operative Treatment of Spina Bifida," which was the last paper read before the Association, as one or two others whose names were on the programme had failed to appear. Dr. Secord's paper was well received, and at the conclusion he was made the recipient of a vote of thanks.

AN ADDRESS PRESENTED TO VISITORS FROM MARITIME PROVINCES.

After the adjournment of the morning session a number of the officers and members of the Maritime Provinces' Association met in the lesser O'Brien Hall, to present an address to the visiting doctors from their home land. Several ladies were present, and before opening Miss Burpee very tastefully played a selection on the piano. When the visitors had gathered together, Mr. John Johnstone, President of the Maritime Provinces' Association, presented them with an address of welcome in which was mentioned the strength of the Maritime Association in British Columbia, wishing the visitors from the East a pleasant visit and recalling the splendid traditions of the Provinces by the Atlantic ocean.

Dr. J. Ross, of Halifax, read an address in reply hoping that those who had settled in the far West from the Maritime Provinces would ever keep up the memories of their old homes, and wishing them prosperity in their new ones.

EXCURSION TRIPS.

About two hundred doctors with their wives and daughters went over to New Westminster in the special cars provided for them yesterday afternoon. After having made a short inspection of the Royal City they embarked on two steamers and were taken down the river past Ladner to Steveston. There the medicoes were duly initiated into the mysteries of salmon canning, the different canneries being thrown open for their inspection. They were also taken on a tour through Chinatown, where they caught a glimpse of life in Chinatown, as it is transplanted in the Far West. They returned by a special C. P. R. train to Vancouver quite refreshed by their outing.

In the morning between twenty and thirty of the doctors drove round with Dr. Underhill, Medical Health Officer, and Colonel Tracy, City Engineer, and inspected the septic tanks.

In the afternoon several delegates, who did not visit New Westminster, were taken for a cruise on the Inlet in the Kestrel.

In the evening a meeting in the interests of Dr. C. J. Fagan's plan for the proposed tuberculosis sanitarium was held in the O'Brien Hall. The Mayor presided and Dr. Mayo-Robson, the celebrated English surgeon, delivered an address.

THE BANQUET.

The dinner of the Canadian Medical Association given at the Hotel Vancouver last night was a distinguished and successful affair. There were about 200 medical men present, nearly all of whom were visitors to the City, and who have been attending the convention of the Association here this week. The event was a highly pleasant one. Dr. Tunstall, the President of the Association, occupied the seat of honor at the table, and on his right hand was Mr. Mayo-Robson, of London, Eng., Prof. Dudley of Chicago University, His Worship the Mayor, Dr. McGuigan; Dr. Sullivan, Senator, of Kingston. On the left of the President, were Dr. Shepherd, of Montreal, Dr. Powell, President of the Canadian Medical Protective Association; Mr. R. Marpole, General Superintendent of the Pacific Division of the C. P. R.

The spacious and well-appointed dining room was well fitted to accommodate the large assembly. The brilliancy of the electric light was augmented by the glint of lighted tapers, and Highfield's orchestra provided music in such a style as to elicit applause from time to time.

THE TOASTS.

After the repast, the toast list was announced by the President, Dr. Tunstall. First, "The King," responded to enthusiastically by the entire assembly singing "God Save the King." The President of the United States was also drunk heartily when "The Star Spangled Banner" was the air. "Canada," proposed by Dr. Brydone-Jack, Secretary of the British Columbia Provincial Association, called for the hearty singing of "The Maple Leaf."

This toast was coupled with the names of Dr. Sullivan, of Kingston, and Dr. McGuigan. Dr. Sullivan's reply opened very wittily, his remarks beginning really when he told of how proud we should be that we were residents of the Dominion. He was glad to see so many from the United States on such an occasion. Dr. Sullivan told of whom he represented from Ontario, and waxed warm and witty over their grand attributes.

Mayor McGuigan, M. D., reminded the members that in the holding of the convention in Vancouver, the Association had completed the extent of

Canada from Prince Edward Island to British Columbia. The members would go down to Victoria on Friday and that would complete the trip to the Pacific Coast. Touching upon Vancouver, he informed his hearers that when he first came to the City, the spot on which dinner had been eaten was forest. He hoped the members of the Association would carry back kind remembrances of their visit to the Pacific Coast.

A song by Dr. Powell was a pleasant interpolation. The selection, entitled, "Where'er St. George's Banner Waves," was rendered in fine voice.

Dr. Chown, Winnipeg, in proposing the toast of the Canadian Medical Association, said with continental railway development it was an easy matter to traverse the Dominion and hold a convention here. It was due to Eastern members in the larger cities that the Association was maintained an active organization, and the present session was remarkable for its large attendance and success. With his toast he coupled the names of Dr. Shepherd and Dr. Good.

Dr. Shepherd, of McGill University, Montreal, after an introductory remark that he recognized some of his old pupils, among them the Mayor, said that the first President, Sir Charles Tupper, was still alive, which was worthy of note. The earlier efforts had been surpassed by the great meetings of later days.

Dr. Good, of Winnipeg, spoke of the benefits of the convention, referring humorously to the length of the papers read. One of the objects of the Association was to bring men together, which had proved beneficial. In his reference to Vancouver, he said it was pleasing to note that a member of the profession occupied the Mayor's chair. Dr. Good said he had come from the County of Bruce and had sat at the feet of his President, Dr. Tunstall, as his school teacher.

GREETINGS BY TELEGRAPH.

Dr. Brydone-Jack read two telegrams which had been received by Dr. Tunstall. One was from J. B. Eagleson, which contained the following: "Yankee doctors, on their way home give three cheers for the convention and the Entertainment Committee." The other was from Hon. Richard McBride, and read: "Kind invitation just received. Regret impossible to be present."

Mr. R. G. Macpherson, M. P., wrote regretting his inability to be present at the banquet and wishing them a pleasant time.

OUR GUESTS.

Dr. Weld proposed this toast. He said that the success of the present convention was due to the presence of distinguished doctors from other countries. Among these were Mr. Mayo-Robson, from London; Dr.

McGillivray, from Edinburgh; Dr. Dudley, from Chicago, and others, whose papers had been of great profit. When they came again he hoped that Vancouver would have a hospital where operations could be carried on with less inconvenience than on the present occasion. With this toast were coupled the names of Mr. Mayo Robson, Dr. McGillivray, Dr. Dudley, Dr. Mackenzie, of Portland, and Dr. Manning, Everett.

Mr. Mayo Robson said Canada was a great country, not only in its details, but in its grandeur. Entering Belle Isle Straits he thought he was near Quebec, but after he had traveled a day and saw the extent of the province, he wondered how great Canada was. When he had crossed the Continent his expectations were realized. When he went back he would know that England was smaller than ever and that Britain was greater than ever. All that was needed was the federation which was now coming about. What was required was to have more Englishmen come to Canada. Narrow policies were replaced by those of a King with a wide knowledge and broad understanding. This was a day of aggregation, not segregation. As a medical man he should not have any politics. He had not seen a more enthusiastic gathering. It was a great pleasure to see 400 or 500 men together at the extreme west side of the Continent. He complimented the resident doctors upon the prospect of a new hospital, and upon the equipment of the present institution. There was no want of learning nor of care among the medical men of this part of Canada.

Dr. E. C. Dudley's first information of Canada was when he was a barefoot boy, and he had formed many opinions of Canada at that time. Since then those good opinions had increased. He said he would like to remark on the different periods in the feeling between the United States and Canada, the latest of which was the period of brotherly love, which was here to remain. In the United States the toast of the King of England was often drunk. British stock and American stock was common stock, and this was preferred stock.

Dr. McGillivray, Edinburgh, said he had learned since coming to the Dominion what true hospitality meant, and said if he remained here he would know what it was to be killed by kindness. The memory of his stay in Canada would remain with him long after he returned to his native country.

Dr. Mackenzie, Portland, Ore., extended thanks for the generous hospitality extended to the delegation from Oregon. It had distinctly a western flavor, which was to him a rare exotic. Since he had made Oregon his adopted home 20 or 23 years ago he had found that the people of that side of the line were much the same as they were in Canada. He was proud to belong to the great Anglo-Saxon race which would ultimately win in the racial struggle now going on. Practically Canada and the

United States were one, only a line, delimited by some engineers, separating them. Next July the American Medical Association would convene in Portland, and as Chairman of Arrangements he extended an invitation to be present.

Dr. Manning of Everett, made a pleasing reference to the similarity of people and said that it would be difficult to find a mistake in the actions of the Canadian Medical Association. In closing he thanked the Canadian Medical Association for the loyal manner in which they had entertained their guests.

Dr. A. A. Macdonald, Toronto,, who was called upon for a Scotch song, said he thought when he came here he was so far from his native heath that he would never be called upon for a speech or a song. He was always a Canadian, but he never appreciated the extent of this great country. This was the preface to a very catchy song.

THE LEARNED PROFESSIONS.

Dr. Lafferty, Calgary, proposed this toast. He depreciated his ability to perform the task, but succeeded admirably. This toast was responded to by Mr. W. R. White, K. C., barrister of Pembroke, and Professor Sinclair, of Manchester, England.

Mr. White said he was at a loss to express his feeling at being present at such a gathering of ability and learning from all parts of America and Britain. He found very appropriate words, however, and his remarks were able and entertaining.

Professor Sinclair declared that this was the first time in his life he had had the pleasure of responding to this toast.

PRESIDENT, DR. TUNSTALL.

Dr. Powell, Ottawa, mentioned his honor of proposing this toast. He had known the President for many years, and his appreciation of him was sincere.

When those present had sung heartily "He's a jolly good fellow," Dr. Tunstall thanked the proposer for his high encomium. When he had received the appointment as President of the Association, he began to think in what way he could carry on the labors of those who had preceded him. If he had succeeded in making this convention a successful one, much was also due to those who had assisted him, and to those also who had come thousands of miles to give their help. If he had done as well as was said, he was satisfied.

The healths of the Treasurer and Secretary, Dr. Small and Dr. Elliott, were also drunk, to which suitable responses were made. Dr. Small, Ottawa, recalled the fact that this was the third largest Convention in the history of the Association. The number of visitors from Great Britain and the United States was also larger than heretofore, and he hoped to

see greater co-operation between the members of the medical profession in the two countries.

Dr. Elliott, Toronto, who for three years had been General Secretary of the Association, affirmed that he had not served with greater satisfaction under any President than under Dr. Tunstall, of Vancouver.

The toast to the health of the local Secretary, Dr. Brydone-Jack was proposed by Dr. Shepherd. Dr. Brydone-Jack said the success of the Convention was not due so much to the Secretary as to the united efforts of the medical men generally.

The banquet closed with the singing of Auld Lang Syne and God Save the King.

26th August, 1904.

The principal business of the morning was the receiving of the reports of committees, and election of officers.

ELECTION OF OFFICERS.

The Nominating Committee sent in the following names as officers for the ensuing year and they were duly elected :—

President—Dr. John Stewart, Halifax.

Vice-Presidents—Prince Edward Island, Dr. McLaren, Montague Bridge; Nova Scotia, Dr. J. B. Black, Windsor; New Brunswick, Dr. A. B. Atherton, Fredericton; Quebec, Dr. James E. Dube, Montreal; Ontario, Dr. H. Meek, London; North West Territories, Dr. W. S. England, Winnipeg; British Columbia, Dr. R. E. Walker, New Westminster.

Local Secretaries—Prince Edward Island, Dr. H. D. Johnson, Charlottetown; Nova Scotia, Dr. G. C. Jones, Halifax; New Brunswick, Dr. T. D. Walker, St. John; Quebec, Dr. J. D. Cameron, Montreal; Ontario, Dr. Stuart, Palmerston; North West Territories, Dr. Hewittson, Pincher Creek; Manitoba, Dr. Popham, Winnipeg; British Columbia, Dr. A. S. Monro, Vancouver.

General Secretary—Dr. Geo. Elliott, Toronto.

Treasurer—Dr. H. B. Small, Ottawa.

Executive Council—Drs. G. M. Campbell, J. Ross, C. D. Murray, Halifax.

Upon motion, the President cast the ballot for the above-named candidates, and they were declared elected.

HALIFAX SECURES NEXT CONVENTION.

It was also decided that the next annual meeting of the Association should be held in Halifax.

FEDERAL HEALTH DEPARTMENT.

Dr. Powell of Ottawa presented a report of the Committee on a Federal Health Department. He said that in accordance with a resolution passed

in London last year, the Committee had interviewed the Government, and he was sorry to report that it could not give them any assurance that the resolution in the matter could be practically considered. He said there seemed to be a general fear lest such a department should interfere with the autonomy of the Provincial Boards, but he had pointed out that there was no fear of that as many matters would come up for consideration that could not be touched by the Provincial authorities. He instanced the medical treatment of Indians which was under the supervision of the Minister of the Interior, and the Quarantine Department under the control of Dr. Montizambert. There were such matters besides as sickness on trails and in camps, which could be dealt with by a Federal Department, and he did not see that there was the least need that it should in any way interfere with the Provincial Departments.

Dr. Fagan said he quite agreed with Dr. Powell's remarks because, as a Provincial Medical Health Officer, he had often been faced with the very same difficulties of which he had spoken. Cases were brought to his notice that were not within the range of the Provincial Department and when he applied to Ottawa he was told that they could not deal with them there.

The following resolution was then carried unanimously: "That the Canadian Medical Association regrets that the Canadian Government has not seen fit to carry out the resolution of this Association in favor of the creation of a Federal Health Department, and be it further resolved that the Association continue to press this matter before the Government, and that the Special Committee in charge of the same be re-appointed and requested to continue its efforts to this end and that copies of this resolution be sent to the Prime Minister, the Minister of Agriculture and the Secretary of State."

RESOLUTION *re* "PATENT MEDICINES."

Dr. Fagan then brought in the following resolution on "Patent Medicines"; "That in view of the large amount of patent medicines which are now on the market containing alcohol and various drugs which, being taken, lead to the formation of evil habits, and are dangerous to the health, and in special view of the false statements concerning these remedies made through the press and by other means, some means should be adopted to control and restrict the sale of such medicines and to prevent fallacious statements advertising the same. Further, that a memorial to the Government be sent to the proper department concerning the matter."

Dr. Shepherd, of Montreal, thought the resolution might have been a little more specific. There was a complaint but no remedy suggested.

He thought that considering the amount of alcohol used in these preparations, the manufacturers should be compelled to print a table of the ingredients as was done in Germany.

Dr. Fagan said the Committee had considered that it would be better first to bring the matter before the authorities in a general way, and let them take what action they might think fit. He scarcely thought it would be courteous to tell them what to do.

Dr. Lafferty said that he agreed with Dr. Fagan in this matter, though, if the Government seemed willing to take the matter up, they might make some suggestion to them next year.

The resolution was then passed unanimously.

REGISTRATION OF PRACTITIONERS.

The Hon. Dr. Sullivan then brought up a resolution urging energetic legislation in connection with the correct registration of medical practitioners.

Dr. Powell said there had been a great deal of prejudice in the Province of Quebec against the change proposed, and the Association must try to remove this misunderstanding on which that prejudice was founded.

Dr. Tunstall said that the great obstacle in Quebec was that the people did not understand our language, but he thought that once this matter was placed clearly before them the difficulties would vanish. The resolution in no way interfered with local practitioners in the Province—all that is required was that anyone wishing to be placed on a par with physicians all over the British Empire must first undergo a Dominion examination.

Dr. Lafferty thought that a memorial should be sent to the Dominion Government in this matter and that it should be propagated in the press.

The resolution was then carried.

The Auditor's report showed the handsome balance of \$602 on the books.

It was also resolved that the usual honorarium be granted to the Secretary.

VOTE OF THANKS.

Dr. Black, of Windsor, N. S., moved and Doctor Lafferty seconded a vote of thanks to the ladies of Vancouver for their efforts in making their stay so pleasant.

Dr. Shepherd moved that a vote of thanks be given to the Canadian Pacific Railway Company for the kind way in which they had treated them on their journey.

Dr. Brydone-Jack moved a vote of thanks to the press for their kindness during the convention. They had been very good in carrying out the instructions given them, as well as in making announcements from time to time. He also included in the motion a vote of thanks to Mrs. Mc-

Lagan of the "World" for her generous donation of papers to the members.

It was resolved also that an acknowledgment should be sent to the British Medical Association for their appointment of Dr. Roddick as representative of the Canadian Medical Association.

A hearty vote of thanks was passed to Dr. Tunstall for the able manner in which he had presided over the Association, and this brought this most successful convention to a close.

CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

Directly after the close of the meeting of the Canadian Medical Association, a meeting of the Canadian Medical Protective Association was held.

Dr. Powell, the President, said that when this Association was first started they had hoped that 75 or 80 per cent of the Medical Association might join them. He thought some alteration was necessary in the constitution to bring this question home to members in distant provinces. He thought there ought to be someone in each province to keep alive the interest in this Association.

Dr. Powell then read his annual report which dealt strongly with the necessity of more increased activity in soliciting membership, though full of faith for the ultimate success of the organization.

Dr. Tunstall said he quite agreed with Dr. Powell as to paucity of membership in the Association, and would suggest a few changes in the constitution. In the first place he thought they should combine the offices of Secretary and Treasurer and place more clerical help at the disposal of the President. In consequence of the need of this, there had been a great deal of irritation among members about having no acknowledgment for the receipt of dues and other matters. He also proposed the appointment of a small Executive in each province whose duty it should be to pass upon all cases occurring within the province and to solicit membership. He moved a resolution to that effect, the executives for this year to be nominated by the President.

Dr. Powell said he had found himself under great difficulties for want of assistance in the provinces in this way. When a case of malpractice occurred, he had to communicate directly with the person, instead of with some disinterested party who was on hand and understood the matter. He regretted to say that a very unfortunate circumstance had occurred in this very City, owing to that position of affairs whereby the good name of the Association had been smirched in the minds of the profession in British Columbia. He found that the person in charge occupied a very high position in British Columbia, and somebody pretending to act on behalf of this Association published a false telegram in the Vancouver

press, the object of which was to show that this person did not occupy in the profession the same place as in the Police Court reports. When he found it out, he had at once telegraphed to Vancouver to say that the telegram was false. Had he had a local Executive to assist him it would have never allowed the good name of the Association to be dragged in the mud in this way. He wished to explain that he had an exact copy of the telegram he had sent which was to the effect that they were to send a sworn statement from the accused that he was innocent, and another from his lawyer to the same effect, together with his receipt, and if the Executive thought it was a case to defend they would do so, but not otherwise. They were willing to defend those whom they thought to be wrongfully accused, but the Association would never defend any doctor for wrong-doing.

Dr. Fagan wanted to know whether they were going to pursue any inquiry as to the origin of the false telegram. He said that as a result of it, a Victoria paper had published an editorial attacking the profession and the methods they pursued.

Dr. Powell said that until he had consulted with the solicitor of the Association he could take no further steps in the matter. Several telegrams had been sent to him asking for aid in the case, and one of these was signed "P. H. Weld," which was manifestly a forgery. He said he thought the position of the Association was quite plain. He had been a good deal attacked since coming here for acting on such slight information, and he was glad to have this opportunity to clear matters up. The Association always investigated a case before dealing with it. Some cases they refused to handle, others they advised to settle out of Court, and some cases they defended. In no case would they defend wilful wrong-doing,—they simply could not do so.

The matter was then dropped without further discussion.

Dr. Powell was re-elected as President of the Association, and Dr. James A. Grant, Jr., also of Ottawa, was chosen as its first Secretary-Treasurer, and the Association adjourned to meet in Halifax next year.

THE VICTORIA PROGRAMME.

All arrangements had been completed for the reception and entertainment of the large party of visitors who arrived from the Mainland on Friday afternoon on the conclusion of the annual convention of the Canadian Medical Association in Vancouver. On Friday evening the party were taken for a trip up the Arm, where a concert was given by the Arion Club. On Saturday morning, they were given a drive round the city, and in the afternoon they were given an excursion down the Straits on the steamer City of Nanaimo. In the evening the delegates were the guests of the Government at a reception in the Parliament buildings.

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EDITORIAL

SIMUL ET JUCUNDA ET IDONEA DICERE VITAE.

For the medical student no truer words than the above ones of Horace were ever uttered, namely, to proclaim the pleasure and profit of life together. Student life is a period of great opportunities, and of some special dangers. The study of nature and nature's laws as revealed in the science of medicine, is one of the most fascinating of all mental occupations. In the study of anatomy, physiology and chemistry, a wide field is opened up for the training of the powers of observation. In the latter studies on the course of diseases and the morbid changes wrought in the body by them, there is ample room for the keenest analysis and the widest inductions.

But while the student must be diligent in the pursuit of knowledge—for there is no royal road to it—it is equally necessary that the social side of life be not neglected. John Locke, a doctor and a great philosopher, remarks: "It is beyond the powers of humanity to spend a whole life in profound study and intense meditation, and the most rigorous exacters of industry and seriousness have appointed hours for relaxation and amusement." Socrates, than whom the world has given us none wiser, attached the utmost value to the possession of true friends. Students would do well to so guard their conduct as to secure the esteem of their fellow students, and lay the foundation for friendships that

"No strifes, no quarrels can divide,
And only death, fell death can loose."

The student must keep himself in a receptive frame of mind. Search for truth demands, that the mind be freed from all narrow formulae, and that life and science must be viewed whole. John Stuart Mill tells you to "keep yourselves in the full air of the world, and play your part in the world's affairs ; always study rather than be passive ; do not be so unreasonable as to expect more from life in the world than life in the world is capable of giving."

"Life," says Seneca, "is a voyage, in the progress of which we are perpetually changing our scenes." This is particularly true of the student. With him the scenes change rapidly, and it requires a fixed and

determined purpose in life to guide the ship in the middle course of safety. Every student should fix for himself a high ideal. The word honor should ever be before his mind. Schiller, the eminent German writer, says: "Every honorable action raises one, while every dishonorable act lowers, even though these be unknown to the world. They act upon the doer for good or evil."

The student should not be a recluse in his habits. "Books," says Bacon, "can never teach the use of books. 'The student must learn by commerce with mankind to reduce his speculations to practice, and accommodate his knowledge to the purposes of life.'" Pope, again, declares that "the proper study of mankind is man." Bacon tersely puts the methods of mental training thus: "Reading makes a full man, conversation a ready man, and writing an exact man." It is along these lines that true mental discipline must ever follow. Sir Thomas Browne, in his *Religio Medici*, advises the student to study "nature, that universal and public manuscript, that lies expanded unto the eyes of all." Of all professions that of medicine is the study of nature.

The student must keep his mind open for the reception of truth. Marcus Aurelius, in his meditations, lays down to all true students the following advice: "Be always provided with principles for these two purposes. First, to engage in nothing but what reason dictates, what the sovereign and legislative part of you shall suggest, for the interest of mankind. Secondly, to be disposed to quit your opinion, and alter your measures, when a friend shall give you good grounds for so doing." The sage of Chelsea, Thomas Carlyle, has spoken to us thus: "And again, hast thou valued patience, courage, perseverance, openness to light; readiness to own thyself mistaken, to do better next time. All these, all virtues, in wrestling with the dim brute powers of fact, in ordering of thy fellows in such wrestle, there and elsewhere not at all, thou wilt continually learn."

Here there is no resting, but a moving. "Choose well; thy choice is brief, and yet endless." Let us quote the following from Goethe: "The coursers of time, lashed, as it were, by invisible spirits, hurry on the light car of our destiny; and all that we can do is in cool self-possession to hold the reins with a firm hand, and to guide the wheels, now to the left, now to the right, avoiding a stone here, or a precipice there. Whither is it hurrying, who can tell?"

Dr. Samuel Johnston has left us all words of wisdom. Weigh them well! "In the midst of the current of life is the gulph of intemperance, a dreadful whirlpool, interspersed with rocks, of which the pointed crags are concealed under the water, and the tops covered with herbage, on which ease spreads couches of repose, and with shades, where pleasure

warbled the song of invitation. Within sight of these rocks all who sail on the ocean of life must pass. Reason, indeed, was always at hand to steer the passengers through a narrow outlet by which they might escape." Intemperance, as held aloft to scorn by Dr. Johnson, means excesses of all kinds; and Professor John Stuart Blackie taught the same lessons when he counselled his students to moderation.

MIND CURES AND MENTAL THERAPEUTICS.

In the *Boston Medical and Surgical Journal* for August 18, there are two very able articles dealing with the above topic:—The one by Dr. Robert T. Edes and the other by James J. Putnam. It will be at once admitted that Drs. Edes and Putnam are thoroughly competent to deal with the subject, and whatever they may say merits careful consideration.

Dr. Edes states that phychic treatment in some form or another occupies a very prominent position in the public mind. It is well therefore for the physicians to consider what morbid processes can be beneficially affected by mental action. In this it is clearly understood that mind of the other person can have no influence, and any result that follows must be due to the action of the sufferer's mind upon his own organs. In the case of fever, occurring during the course of acute or chronic diseases, the mind of the patient has no influence; and it is readily seen why this is so. In the large group of degenerations, the mind is again powerless to effect any change for the better. Arterial sclerosis, tabes dorsalis, and granular kidney go on to their fatal termination despite complete faith in any method of cure, or the most decided mental belief that there is no disease, or that by an effort of the mind they can be shaken off the system.

Hope, even if falsely implanted in the patient's breast, may temporarily stimulate the flagging digestion, or lead the person to ignore his feelings and imagine he is better than he really is, just as foolish fears may cause him to regard his own case too seriously.

There are some diseases of the functional type, or which do not involve directly the untrition or the processes of organic life but which may do so indirectly, and interfere with the comfort of the individual. It is in this class of cases that we find psychic influences to effect the most marked results. But even here there are very many conspicuous failures. This proves very clearly that mental influence has but a very limited sphere of usefulness in practical therapeutics, as a really curative agency, though often helpful along with other measures in tiding the patient along, while the power of nature and judicious treatment are restoring the balance of health.

In states of mental depression such as melancholia, one would think that the stimulating influence of the hope of cure, as held out by the faith-healer, would be of special value. But it is just in such cases that we have to await the slow and gradual restoration to a normal action of the mind, and in many cases, even in spite of every effort, this restoration never takes place at all. In all those mental states, characterized by delusions, it is absolutely impossible for any form of phychic therapeutics to act upon them.

Dr. Putnam in his carefully reasoned article remarks that many cases of nervous derangements must be studied from the standpoint of the gynacologist, the orthopedist, the digestive organs, etc. When everything has had due attention there remains many cases in which proper education of the mental aspects of these cases is of undoubted value. One of the main objects of the physician is to implant in the minds of these patients the sentiments of courage, confidence, patience and determination. This can often be best accomplished by a well-reasoned appeal to the patient's judgment than by a resort to crude mysticism.

For the study of nervous affections, Dr. Putnam divides them into neurasthenia with its distress of body and mind; and those cases with periodic outbreaks, as hysteria and epilepsy, with their morbid fears, frights, phychoses, and insistent ideas. It is in some of these cases, especially neurasthenia, that the judicious employment of mental influences is so helpful. While this is true, it does not mean the resort to the ignorant practices of the many kinds of "psychic healers" with which we are familiar.

THE RECENT MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

It is noteworthy that the meeting held this year in Vancouver, though in the extreme West of Canada, was the third in attendance in the long history of the Association. It is also worthy of more than a mere passive word that this Association is taking so much interest in public medical affairs and in questions that affect vitally the welfare of the entire profession and people.

One of the questions that claimed considerable attention is the all-important one of tuberculosis. A resolution was adopted urging upon the governments of the various provinces to give the matter attention and to adopt measures looking towards the prevention of the disease. It is encouraging to notice that so influential and representative a convention as the Canadian Medical Association has given prevention of tuberculosis its serious consideration.

Patent medicines came in for a full share of discussion. To say that the sale of patent medicines has become a huge national curse is putting it mildly indeed. The amount of alcohol thus sold to the public is only measured by the thousands of barrels, and the quantity of opium, chloral, bromide, cocaine, etc., totals into the tons. Is this evil to go on forever? Cures are advertised for all forms of disease, many of which are known to medical science to be absolutely incurable. It is true the legislating authorities attempted some measures to put a check upon this great and growing curse. It is doing more harm than many of our serious diseases.

A Federal Health Department was again brought up for consideration. This is a very important subject, and one that the Government of Canada must some day take into consideration. *Salus populi suprema lex est* shall ever remain true. It may require no small amount of perseverance to induce the authorities to move in this matter, but the object is well worth the trouble. The medical profession has no motive other than the good of the people. It is this fact that should give great weight to its recommendation regarding the appointment of a Minister of Health.

Dominion Registration was also discussed. The members of the profession are all familiar with Dr. Roddick's bill looking towards the establishment of a standard for the entire Dominion. This bill requires the assent of the various provinces before it can become law. So far the province of Quebec has withheld its approval and so the bill remains a dead letter. There are two ways of proceeding:—One is to educate the be stayed. I well remember one case of very severe and long-established profession in Quebec up to the view of accepting the bill. This we fear will prove an impossible task. But, if conferences were held between prominent members of the profession throughout Quebec and the other provinces there might result an agreement upon the subject. The other plan is to have the bill amended in such a manner as to grant the power to the provinces other than Quebec to form a common standard of registration. We think that when the profession in Quebec saw the happy workings of such a bill the main obstacle would be removed.

Dr. Powell, of Ottawa, again reported upon the Canadian Medical Protective Association. We have on a number of occasions recommended the claims of this Association to our readers. There is to-day no more worthy organization before the Medical Profession of Canada than this Association. It should have on its list of membership every practitioner in good standing in the Dominion. Dr. Powell and those associated with him deserve much praise for their efforts to build up the Canadian Medical Protective Association.

HEMIPLEGIA.

Hemiplegia is not a disease, but a symptom. It is caused by some lesion of the motor centres or tracts, or as a neurosis.

There are various causes for hemiplegia, but the most common are haemorrhage, thrombosis, an injury, a tumor, and some functional disturbance—the neurosal form.

Conjugate deviation of the eyes always takes place in the early stage of the trouble, but it does not last more than a day or two. As the eye muscles are represented in both hemispheres this symptom is fleeting. The eyes look towards the side in which the lesion is located.

In the facial muscles the paralysis is most marked at the angle of the mouth and in the lower facial muscles. With regard to the orbicularis it should be noted that in facial or Bell's paralysis the eye cannot be closed; whereas in hemiplegia of cerebral origin, there is some impairment on the affected side, but the eye can be closed.

With regard to the upper extremity it should be remembered that the more completely a muscle is dependent upon one side of the brain, the more complete will be its loss of function in the event of disease of that hemisphere. The distal parts suffer most. Thus the fingers will be more paralysed than the wrist, and this than the elbow, and this latter again more than the shoulder. Extension muscles suffer most, and are the last to recover.

In like manner in the case of the lower extremity the foot is more affected than the knee, and the knee than the hip. Dorsal flexion of the foot and extension of the toes suffer most and recover last.

As a result of a destructive lesion, there is a descending degeneration in the motor tract and an increase in the reflexes. The knee-jerk, and the tendon reflexes of the wrist, elbow, and shoulder are also exaggerated. So also are the periosteal reflexes and there is ankle clonus. In two or three months, late rigidity commences, causing contractures in the flexor muscles and sometimes extreme deformity. Thus the arm is adducted, the elbow flexed, the wrist flexed and the fore-arm pronated, the thumb and fingers turned in upon the palm. The Babinski sign is of importance. In a normal condition, the drawing of the finger-nail across the sole of the foot causes flexion of the toes towards the sole of the foot. In lesion of the motor tract in the brain or cord, when the finger-nail passes across the sole of the foot, the toes, specially the great toe, is extended towards the dorsum of the foot.

In hysterical hemiplegia, the leg suffers more than the arm, as a rule; while in organic paralysis, the reverse is the case. In the hysterical form the face usually escapes, or is affected by spasm rather than paralysis. The gait should be noted. In organic hemiplegia the leg is circum-

ducted, whereas in the hysterical form, it is dragged like an inanimate thing. In the organic form there is usually a good deal of motion about the hip and shoulder of the affected side, as these regions are innervated from both sides.

Hemiplegia usually occurs in adults, but it is met with in infancy and may result from injury at birth.

There may be a combination of hemianæsthesia, with the hemiplegia. The loss of sensation may be only tactile, or it may be for location and pain also. When sensation is affected, it has the same distribution as the motor paralysis. It is most marked in the parts that are most volitional. There may be hemianopsia. In the hysterical disease the eye symptoms are those of crossed amblyopia and blunting of taste, smell and hearing. The sensation may be so completely absent in hysterical paralysis that no stimulants can arouse it. This is rarely the case in organic hemiplegia.

LACTO-GLOBULIN AS A NUTRIENT.

In all severe illnesses and exhausting diseases one of the urgent needs is a nutrient that is easily digested, yields a large amount of food to the muscular and nervous systems, and is readily prepared. Lactoglobulin meets these requirements in a very satisfactory manner.

In continued fevers one of the great dangers is the wasting of the muscles, and the failure of the strength of the heart. It has been proven by the most careful investigations that this waste in the muscular tissue of the body can only be checked by the proper use of proteids. Lactoglobulin is a practical food which is easily prepared, easily digested and very nutritious.

Under its use a patient will pass through an attack of typhoid or pneumonia with much less waste and exhaustion in the muscular system than when fed on milk and farinaceous foods in the usual way. We have tested the merits of Lactoglobulin in two cases of typhoid fever of a very severe type.

Careful examinations proved that the milk was not well digested even though peptonized. The Lactoglobulin with abundance of water and a little cream constituted the sole diet of these cases.

The only medicines given were strychnia as a heart tonic, and an occasional dose of magnesium sulphate when the bowels required moving.

The late Dr. Milner Forthergill pointed out that a typhoid fever patient was starved to death in the midst of plenty, because the milk, beef-tea, and gruels were not digested, and consequently the patient was not nourished, though regularly fed. Dr. Alex. Haig has shown that emaciation in fever states is mainly due to waste in the muscles and that this

emaciation in fever states is mainly due to waste in the muscles and that this must be met by a proper supply of albuminous foods.

In Lacto-globulin the albuminous nutriments of milk are obtained by a process that renders them particularly nutritious and assimilable. The milk ferments are not destroyed, and aid in the process of digestion. Boiling milk destroys these enzymes, and lessens the nutritive qualities of the proteids. In Lacto-globulin these active enzymes are preserved. It would seem that this is a nutrient of great value, and should receive a trial in severe and wasting diseases where proteids of a digestible and nutritious character are so urgently required.

PRECAUTIONS FOR CONSUMPTIVE PERSONS.

The following rules are taken from an article by Arthur Newsholme, M. D., F. R. C. P., Medical Health Officer of Brighton, England, which appeared in the August issue of the *Columbus Medical Journal* :—

Consumption is, to a limited extent, an infectious disease. It is spread chiefly by inhaling the expectoration (spit) of patients which has been allowed to become dry and float about the room as dust, or by directly inhaling the spray which may be produced when a patient coughs.

Do not spit except into receptacles, the contents of which are to be destroyed before they become dry.... If this simple precaution is taken there is practically no danger of infection. The breath of consumptive persons is free from infection except when coughing.

The following detailed rules will be found useful both to the consumptive and to his friends :

1. Expectoration indoors should be received into small paper bags and *burnt* immediately; or into a receptacle which is emptied down the drain daily and then washed with boiling water.
2. Expectoration out of doors should be received into a suitable bottle, to be afterwards washed out with *boiling water*. If a paper handkerchief is used this must at once be placed in a waterproof bag, the contents subsequently burnt and the bag washed daily.
3. Ordinary handkerchiefs, if ever used for expectoration, should be *put into boiling water before they have time to become dry*, or into a solution of a disinfectant, as directed by the doctor.
4. *Wet* cleansing of rooms, particularly of bedrooms occupied by sick persons, should be substituted for "dusting" and sweeping.
5. *Sunlight* and *fresh air* are the greatest enemies of infection. Every patient should sleep with his bedroom window *open* top and bottom, a screen being arranged, if necessary, to prevent direct draught and the patient should occupy a separate bedroom.

N. B.—The patient *himself* is the *greatest gainer* by the above precautions, as his recovery is retarded and frequently prevented by renewed infection derived from his own expectoration.

6. Persons in good health have little reason to fear the infection of consumption. *Over-fatigue, intemperance, bad air, dusty occupations and dirty rooms favor consumption.*

STREPTOCOCCUS AND TETANUS ANTITOXINS.

Dr. Victor C. Vaughan, of Ann Arbor, Mich., after discussing in a very lengthy and careful manner the state of our knowledge up to the present, concludes his article on the above topic in the May issue of *The Physician and Surgeon* as follows:—

(1) We must know more about streptococcus toxin than we do, and must be able to prepare a soluble streptococcus toxin before an antistreptococcic serum of value can be prepared.

(2) There is no satisfactory proof that any of the antistreptococcic sera now employed by the profession have any therapeutic value. I beg not to be misunderstood upon this point. These preparations are not fraudulent, nor are they made for the purpose of deceiving. On the other hand, they are made with the very best of intent, but no one at the present time possesses sufficient knowledge of streptococcus toxin to be able to prepare an antistreptococcic serum.

(3) There is at present no satisfactory method of standardizing antitetanic serum. When we use these sera we are quite ignorant of the value of the preparation which we are employing. There is, however, no danger apparently of using too much, as it has been shown that antitetanic serum is harmless.

(4) I consider that the prophylactic value of antitetanic serum has been abundantly demonstrated, and I would recommend that prophylactic doses be given whenever the surgeon is called upon to dress a wound which in his opinion might be infected with tetanus bacilli. Indeed, I recommend that a prophylactic injection be given at the time of dressing and that this be repeated on the third, fifth and seventh days after the receipt of the wound.

THE PRACTICE OF MEDICINE.

Much has been written and said on the ancient and honorable character of the medical profession. What the study of medicine has been the means of accomplishing for humanity cannot be valued by any gold standard. Preventive medicine has blessed its hundreds of thousands; vaccination has saved more people than the wars of the last

century destroyed; anæsthesia has brought consolation in the hour of suffering to its millions; and antiseptics have enabled surgeons to rescue countless numbers from an impending fate. To prevent disease, to prolong life, to lessen suffering, and to soothe the dying, are the noblest acts to which anyone could direct his thought and skill. The medical profession is the only one that bends all its energies towards the curtailment of its own special work. For these great services the profession should receive a fair reward at the hands of the public. Unfortunately, the profession, as a whole, has not reaped its own where it has so bountifully sown. And this is often due to the fact that medical men have not followed the ordinary principles that govern business men in their dealings with each other and with the public. It may be safely said that doctors, as a class, have not been careful in the collection of their accounts. It is all very well to be charitable, but it will not do to be all charity. This would not be just to one's self. In the rendering of charitable services, it is well to remember that there are the Lord's poor, the devil's poor, and the poor devils. The doctor should select the objects of his charity with some care.

The regular collection of accounts has several good effects on a doctor's clientele: it teaches them that he expects to be paid for his services, it prevents their bills becoming large, it weeds out bad pay early, it gives him the use of his money, and it avoids many losses due to removals and deaths. Suppose a doctor has \$4,000 in book debts that a reasonable effort could collect. At 6 per cent. this means an annual loss of \$240. But one of the best results of close collection of one's accounts is that it helps to hold one's patients. Few things is more effective in losing clients than uncollected accounts. To avoid payment, they go elsewhere. If their accounts had been collected regularly and their balances kept small this would not so frequently happen. A physician may possess every quality of head and heart requisite to make him successful, but if he does not collect his accounts he will not make his profession pay. There is no good reason why he should not.

Some physicians have to struggle hard against an inborn carelessness on the matter of the business side of their profession. But the struggle must be made and kept up from day to day. It will bring a rich reward. A moderate practice carefully collected will yield more than a large practice neglected on its business aspect. It is easier to get patients than to get their fees, and easier to get the fees than to keep them. Always remember what Sancho Panza said to Don Quixote, that "a little money in one's own pocket is better than much in another man's purse." Careful collections enables a doctor to do what is known

as sifting. Poor pay is poor practice and in the end the physician is better without it. The late Bishop Strachan once said, while addressing some medical students, that when they got into practice they should render their accounts *dum dolente*—while the patient still felt some of the pain of the disease for which they had been attended.

It is a very bad thing for a doctor to acquire the reputation of being a careless collector. It has the effect of making what would be good pay patients slow in their settlements, and it tends to bring doubtful pay cases his way. Some patients come to a doctor because they wish to confer a favor on him, some because he is the nearest, and others because they regard one doctor to be as good as another. These classes are rarely good pay. Keep their accounts small and get rid of them as soon as they prove doubtful pay with the least loss. As a rule, too, they are very exacting and would consume all one's time.

We have said it before and shall say it again that it is very poor policy for a doctor to take lodge or contract practice. If every doctor would refuse such engagements, the total amount of sickness would be the same and would require the same amount of attendance. There would be the vast difference, however, that the fees would be just and the sick would follow the bent of their own inclinations in the selection of their medical attendants. This would be much better for all parties. The loss in fees and in professional reputation through lodge and contract practice is very great. How much better it would be to give the time to a desirable practice which is given to the undesirable lodge practice.

THE TREATMENT OF SYPHILIS.

In the early part of the sixteenth century, mercury was employed in the treatment of Francis the First. The pill used on that occasion was one made by a doctor Barbarossa. Some two hundred years ago Astruc in his work on syphilis held strongly to the view that crude mercury by inunction was the preferable plan of treatment. From a short article, on the Treatment of Syphilis by Mr. Jonathan Hutchinson, in the August *British Practitioner*, we learn that he holds the same opinion; and that, when he advises administration by the mouth, it is not because it is the best, but the most convenient method.

Mr. Hutchinson takes strong view that the sooner treatment is commenced the better. He contends that an effort should be made to suppress the secondary manifestations of the disease. That this can be done in the majority of cases is undoubtedly true. By the suppression of the secondary, or blood stage, there is much less risk of tertiary

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Hutchinson regards gummata as local recrudescences of matitis, pharyngitis, etc. of the secondary stage. If the is brought under control before these symptoms appear, a greatly reduced liability to germmata of the skin and r years.

point on which he lays stress is not to begin treatment acter of the primary sore is definite. By adopting this s no doubt in the mind as to the propriety of continuing for a lengthy period. The treatment should be continuous at one year

hinson's favorite pill contains one grain of grey powder and Dover's powder. The patient is to take one of these pills a day, after meals, for a few days; and, if there be no takes thereafter four, five or six a day. An alum mouth-d in preventing ptyalism. "All soups, fruit and green e peremptorily forbidden." If the iodides are required they ven in liquid form separately from the mercury. Mr oes not favor giving the iodides and mercury in the same is when given separately they are both more manageable. re the patient comes under treatment in the secondary b, perhaps, marked ulceration, it is well to give the iodides along with the mercury.

PERSONAL AND NEWS ITEMS

. Burnham, Toronto, is back from his trip to Britain.

ibbon, of Toronto, has spent two months in Britain and

ert Bruce, of Toronto, is recovering from his recent severe

A. Corbett and McKinley have entered into a partnership at

am Bayard, of St. John, N. B., celebrated his 91st birthday st.

. McNulty and Miss Sullivan, both of Peterborough, were ied.

e Brown and Mrs. Brown, of Toronto, have returned from Britain.

y friends of Dr. J. T. Duncan, of Toronto, regretted to learn f his son.

Dr. George Elliott, of John St., Toronto, has removed to the corner of Beverley and Cecil Streets.

Dr. W. S. Fraleigh died at his home in Toronto on 20th August. He was once an alderman for Toronto.

The marriage of Dr. W. R. Cook, of Elmwood, and Miss Bruelstook took place a short time ago in Toronto.

Dr. C. J. Martindale, of York, has gone to Burlington to take the practice of the late Dr. Wm. Richardson.

Dr. J. C. Forster has been appointed to the position of house gynaecologist Royal Victoria Hospital, Montreal.

Lord Strathcona and Mr. Macdonald have each given \$25,000 towards the endowment of McGill Medical Faculty.

Dr. and Mrs. Dawson, of Toronto, have returned after spending four months in England, Scotland, Ireland and France.

Dr. Charles O'Reilly, of Toronto, was elected First Vice-President of the National Association of Hospital Superintendents.

Dr. James L. Biggar, of Tilsonburg, was married September 22nd to Miss Helen Louise, daughter of Mr. and Mrs. W. B. McMurrich, of Toronto.

Dr. D. M. McCarthy, formerly house surgeon at the Water Street hospital, Ottawa, has purchased the practice of the late Dr. W. P. Buckley, of Prescott.

After an illness of over three months, Dr. John Cascaden, ex-M.P.P. for West Elgin, and one of the oldest practising physicians in Ontario, died at his residence in Dutton 31st August. Dr. Cascaden was born at Ballyshannon, County Donegal, Ireland, in 1840.

A. Y. Massey, B.A., (Tor.) M.D., C.M., (Trin.) Benguella, West Africa, has an article on a new tropical disease in the September number of the Journal of Tropical Medicine published in London, England. Dr. Massey has done considerable original research in tropical diseases.

It is a decided advantage when a physician either wishes to buy or sell a medical practice to have some central bureau where he may be brought in contact with men who wish to sell or buy, and where strict confidence and honorable dealings are practiced. The Canadian Medical Exchange, under the management of Dr. Hamill, meets this important department of medical affairs most fully, and we recommend our readers to secure the doctor's ripe experience in this line when occasion requires. In every issue of this journal among the advertising pages will be found a number of practices for sale. The list changes from month to month

BOOK REVIEWS.

MEDICAL MONOGRAPH SERIES NO. 9.

is by Wyatt Wingrave, M.D., Physician and Pathologist, Central London Throat and Ear Hospital, late President British Laryngological, Rhniological and Otological Association. London: Bailliere, Tindall & Cox. 8 Henrietta Street, Covent Garden.

the editor of these monographs, Dr. David Walsh, in his preface the aim of this series is to sketch in brief compass the chief features in subjects of every day interest to students and practitioners. The editor has displayed excellent judgment in the selection of subjects which would certainly have entrusted the one on adenoids to no abler pen than that of Dr. Wyatt Wingrave. Wingrave's articles are always good, and he gets something new and original in them, and his small work on adenoids certainly is no exception.

He uses the term "pharyngeal tonsil" in an anatomical sense, and the word "adenoid" is used as referring to its clinical or morbid condition.

He does not consider the small ill-defined depression formed by the cushion of lymphoid tissue called the pharyngeal bursa (recessus velatus medius) is entitled to sufficient importance to be deserving of a special name or disease. He believes that clinically and anatomically distinction between it and the rest of the pharyngeal lymphoid tissue is superfluous. The chapter devoted to the anatomy of the naso-pharynx and microscopical anatomy of the lymphoid tissue therein is clear and complete. His experience in connection with tuberculosis of the pharyngeal tonsil scarcely supports the view, recently so strongly held by many writers, that primary tuberculosis is common. Scarlet fever, measles and diphtheria are given as the most common cause of inflammation of the pharyngeal tonsil. A cause not infrequently found to be the cause is the excessive and injudicious use of the nasal douche. The inflammation is drawn to an anæsthetic state of the fifth and superior cervical nerves in long standing cases of mouth breathers. Among the many deformities adenoids may cause, torticollis is mentioned as not very infrequent, but one is somewhat surprised to see squint mentioned. The chapter on diagnosis is excellent. He states that in the absence of corroborative evidence are less likely to be congenital syphilis than to adenoids. Attention is drawn to the importance of noting the relationship in size between the adenoids and the vault of the pharynx as a small mass in a small cavity cause symptoms as serious as a bulky mass in a normal naso-pharynx. A fragment, however small, should be thoroughly removed in infancy as it will most likely enlarge before six years of age; if, how-

ever, a small fragment be found about *puberty* and causing no ill effects it may quite properly be left alone. He does not believe medicinal treatment of any appreciable value in the management of these cases. If used, iodine and arsenic are probably best. The iodine should be given in combination with tannic or gallic acid. The galvanic snare, electric puncture and cold snare are quite properly condemned as being impracticable. As an anæsthetic nitrous oxide is decidedly favored, while in very young children (under three) somnoform is preferable. Chloroform is condemned. The entire chapter dealing with the operation and preparation of the patient is very clearly and concisely written. Gargles, sprays, douches, *et al*, are not advised in the post operative treatment. In the reviewer's experience, however, these little patients are made much more comfortable by using a disinfecting ointment in the nose following the operation and cases seem to him to do better. The chapters dealing with the complications and after care of these patients are the most valuable in the book, and warning is given not to interfere with the turbinates at puberty.

The small chapter devoted to adenoids and athletics is particularly appropriate. A very excellent chapter at the end of the book is written by Mr. Holten George on anæsthetics as applied to adenoid operations. Mr. George's extensive experience in this work and the thoroughness of his methods with attention to every little detail makes him most competent to deal authoritatively with the subject. A very valuable feature of this book is found in an extensive formulæ at the end. For a book of but 126 pages, it contains a fund of valuable information both to the specialist and general practitioner.

MATERIA MEDICA FOR NURSES.

Materia Medica for Nursing. By Emily A. M. Stoney, Superintendent of the Training School for Nurses in the Carney Hospital, South Boston, Mass. Beautiful 12 mo. volume of 300 pages. Second edition, thoroughly revised. Philadelphia, New York, London: W. B. Saunders and Company, 1904. Canadian Agents: J. A. Carveth & Co. Limited, 431 Yonge St. Toronto. Cloth, \$1.50 net.

This little work on *Materia Medica* has proved of great value to the nursing profession, evidenced by the demand for a second edition. The statements are not only clear and definite, but the information given can be relied upon as being accurate. In making the revision for this new second edition, the entire text shows evidence of having been gone over with the greatest care. All the new drugs which have been shown to be of actual therapeutic value have been included, their preparations, uses and doses being clearly and fully described. A valuable feature of the

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is the Appendix, containing such practical matter as Poison-Emerges, Dose-Lists, Weights and Measures, etc., as well as a Glossary of terms used in materia medica. There is no doubt in our minds but this little work is the best of its kind.

VON BERGMANN'S SURGERY.

System of Practical Surgery, By Drs E von Bergmann, of Berlin, P. von Bruns, of Tübingen and J. von Mikulicz, of Breslau. Edited by William T. Bull, M. D. Professor of Surgery in the College of Physicians (Columbia University), New York. To be complete in five imperial octavo volumes, containing over 4,000 pages, 1,600 engravings and 110 full-page plates in colors and monochrome. Sold by subscription only. Per volume, cloth, \$6.00; leather, \$7.00; half morocco, \$8.50, net. Volume III just ready. 918 pages, 15 engravings, 21 plates.

The American edition of von Bergmann, von Bruns and von Mikulicz's great surgery proceeds regularly and rapidly to completion. The first volume dealt with the Head, the second with the Neck, Thorax and Spinal Column, and the third considers the surgery of the Extremities. The arrangement of the subjects in the successive volumes is evidently planned for the purpose of facilitating consultation.

It is significant of the development of surgical knowledge and skill throughout America that the highest literary product of European surgery should be so warmly welcomed here. Even at this early date demand for the work exceeds expectations. As each country has its own conditions and preferences as to operations, the translators, themselves skilled surgeons, under the general editorship of Professor William T. Bull, of New York, have added whatever is necessary to the work representative of American practice, so that readers may be assured of possessing the latest and fullest surgical knowledge of two continents. Modern progress is so rapid, and withal so solidly based, that it behooves every surgeon, and likewise physicians who even occasionally perform surgery, to add this library of surgical literature to their shelves.

The third volume exceeds even its two predecessors in wealth of engravings and colored plates.

DUNHAM'S NORMAL HISTOLOGY.

Text-book on Normal Histology for the use of Students and Practitioners of Medicine. By Edward K. Dunham, Ph.B., M.D., Professor of General Pathology, Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York. New (3d) edition, revised and enlarged. In one octavo volume of 334 pages, with 260 illustrations. Cloth, \$2.75, net. Lea Brothers & Co., Philadelphia and New York, 1904.

The general plan of this work is the outcome of the author's experience in teaching the subject to students under conditions which require

economy of time—conditions which in these days of crowded curricula prevail in nearly every medical college in the country. The work is a clear and concise exposition of its important fundamental subject, and has proved to be admirably adapted to the needs of students, as well as of those physicians who desire quickly to keep themselves posted on the latest discoveries in Histology.

The present revision has been very thorough, bringing the work well up to date, and, in addition, there has been inserted a most valuable and practical section on the Care and Use of the Microscope, and on Histological Technique. No better text-book and laboratory manual on Normal Histology has ever been issued, and its great popularity has made possible its publication at a price, the reasonableness of which is appreciated by every student.

We can very confidently recommend this book.

RADIOTHERAPY, PHOTOTHERAPY AND HIGH FREQUENCY CURRENTS.

The Medical and Surgical Applications of Radiology in Diagnosis and Treatment. By Charles Warrenne Allen, M.D., Professor of Dermatology in the New York Post-Graduate Medical School. Octavo, 618 pages, 131 engravings and 27 plates. Cloth, \$4.50, net. Lea Brothers & Co., Publishers, Philadelphia, and New York.

Recent discoveries in radiant energy have developed a new and important system of therapy. In fact, such positive results have already been achieved in maladies which were hitherto considered intractable, as to warrant the recognition of Radiotherapy as a very efficient addition to the resources of the profession. Dr. Allen's work is peculiarly opportune. It is based upon practical experience, as well as upon a careful review of the great mass of literature on the subject coming from almost all quarters of the globe. Naturally, in a science so new, much faulty observation has been encountered, and in this volume no effort has been spared to eliminate the errors and to present the subject correctly and abreast of its position to-day. Ample information is given upon the physical as well as the technical side, to equip the reader for the selection and management of appliances. The object of the work is always practical, and it has been the earnest endeavor of the author to enable his readers to secure for their patients prompt and permanent benefit. Accordingly, much attention is given to questions of diagnosis and treatment, and, inasmuch as such powerful forces as are treated of in this volume may do harm if improperly applied, cautionary directions are carefully given and exact instructions for the determination and measurement of dosage. The author has by no means lost sight of the

mands of undergraduate students, and his long teaching experience enabled him to produce a work which is admirably adapted to teaching purposes. The illustrations are numerous and excellent.

A TEXT-BOOK OF MECHANO-THERAPY.

(Massage and Medical Gymnastics.)

For Medical Students, Trained Nurses and Medical Gymnasts. By Axel V. Grafstrom, B. Sc., M. D., Attending Physician to the Gustavus Adolphus Orphanage, Jamestown, N. Y. Second edition, revised, enlarged, and entirely reset. 12 mo of 200 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. Cloth, \$1.25 net.

The second edition of this useful little work has been entirely written, reset, and very much enlarged. Two chapters have been added—one on Massage of the Eye, Ear, Nose, and Throat, and the other on Pelvic Massage. Seventeen new illustrations have also been added. The author states that his object has been to present a work that would be useful as a text-book to students, trained nurses, and medical gymnasts, and as a reference book for the general practitioner, and in our opinion he has fully accomplished his purpose. It is certainly a practical and clear consideration of the subjects of massage and medical gymnastics, and it is with pleasure that we recommend it to our readers. The mechanical get-up is all that could be desired.

TAYLOR'S PRACTICE OF MEDICINE.

Manual of the Practice of Medicine by Frederick Taylor, M.D., F.R.C.P. Senior Physician to, and Lecturer on Medicine at Guy's Hospital; Consulting Physician to the Evelina Hospital for Sick Children; President of the Clinical Society; Examiner in Medicine at the University of London; Late Examiner in Medicine at the University of Durham and to the Royal College of Physicians and in Materia Medica and Pharmaceutical Chemistry at the University of London. Seventh edition. London: J. & A. Churchill, 7 Great Marlborough Street, 1904. Price 15s. net.

The first edition of this work appeared in 1890; and the present, seventh, edition this year. During the fourteen years it has been before the medical profession it has become a general favorite. The reasons for the marked popularity of this work on the practice of medicine are its condensed methods of treating the various subjects, the reliable character of its teachings, the attention given to treatment, and that it is up-to-date on all points. It is a crown octavo volume of a little over 1,000 pages; and yet one can find practically everything in it that could reasonably be expected in a work on the practice of medicine. A review of the book convinces one of the fact that the author is a physician of great experience, and that, while the literature of medicine is freely

drawn upon, it is not a book made from other books, but one largely built upon the wide experience of the author. The literary style of the author is good, being simple, direct and perspicuous. Acute rheumatism and dysentery are grouped among the infectious diseases, and acute pneumonia with the diseases of the lungs, though it is regarded as an infectious disease with the primary seat of infection in the lungs. On the same principle that dysentery is removed from the diseases of the digestive system and placed among the infectious diseases, we think that acute pneumonia should also be classified with these and removed from among the diseases of the lungs. We can speak in the very highest terms of praise of this work. It is a safe and trustworthy guide to the practice of medicine.

WOOD'S REFERENCE HAND BOOK.

A Reference Hand-book of the Medical Sciences, embracing the entire range of Scientific and Practical Medicine and Allied Science. By various writers. A new edition, completely revised and rewritten, Edited by Albert H. Buck, M.D., New York City. Volume viii. Illustrated by chromo-lithographs and four hundred and thirty-five half-tone and wood engravings. New York: William Wood and Company.

This volume completes this remarkable encyclopedia of medical science. It is a work of the highest merit in the facts that it covers the whole range of medical sciences, that its articles are of the most reliable character, and that the artistic side of the publication is all that the most exacting could demand. On former occasions it has been our pleasure to review individual volumes as they appeared. On the present occasion we speak more of the completed work. We do not hesitate for a moment in making the statement that every doctor in active practice should secure a set of the Reference Hand Book. By so doing he will have at his hand a complete library, thoroughly up-to-date. The present volume contains a complete index to the eight volumes. This index gives the article, the volume and the page. Those who have these volumes could not be induced to part with them, while those who do not possess them know not what they are losing thereby. We recommend these volumes because of their beauty, excellence, completeness, and trustworthiness.

MISCELLANEOUS.

HOW TO AVOID PRESCRIBING OPIUM AND MORPHINE.

Dr. N. B. Shade of Washington, D. C. in an article published in the Medical Summary refers to many unfortunate effects of prescribing opium and morphine, intimating that the depressing after-effects of the

administration of these drugs more than offsets the temporary good accomplished by their use. He mentions a very prominent congressman whose life, in his opinion, was cut short by the administration of morphine hypodermically in the case of pneumonitis. Dr. Shade states that he still prescribes morphine, but very seldom, as he finds it much safer to use papine. Papine, in his opinion, possesses all the desirable qualities of opium with the bad qualities eliminated. Some of the brightest minds of the present age are now being devoted to the development of a therapy in which the primitive bad effects of many important drugs are eliminated. Where the therapeutic action of morphine or opium is desired, it would seem to be a safe procedure to give papine a trial.

IRREGULAR MENSTRUATION AND TREATMENT.

By E. C. WILLEY, M.D., Louisville, Ky.

Practitioners of medicine are consulted by no class of patients who display greater solicitude than those who have amenorrhea.

In the popular mind failure of the menses to appear is supposed to be due either to pregnancy or tuberculosis, and either may cause a degree of anxiety that is truly intense.

The term amenorrhea is used to mean the total absence of the menstrual discharge, or a marked deficiency in the quantity of the flow. Amenorrhea may be physiological and pathological. During pregnancy the absence of the menstrual discharge is, of course, physiological and demands no consideration in this article. When pathological, the causes of amenorrhea may be said in general to be due to the following:

(1) Taking cold, at or near the menstrual epoch. (2) severe mental perturbation, as fright sorrow, or great elation of spirit. (3) It may be symptomatic in several affections, as tuberculosis, anaemia, chlorosis syphilis, typhoid fever, nephritis pelvic, peritonitis, and other morbid conditions. (4) Obesity. (5) Luxurious life, or overtaxing the nervous system. (6) Stenosis or atresia of the cervical canal, or imperfect development of the tubes, ovaries or uterus. (7) Vicarious menstruation may make the condition obscure, there being a discharge at the regular monthly period from the nose, lungs, bladder, stomach, nipple or other part.

The treatment of amenorrhea must comprehend attention to general considerations, and special indications must be remembered in the various expressions of amenorrhea.

The treatment was in a word, comprehend remedies and measures which are indicated by the etiological factors present in every case which comes up for treatment. When the amenorrhea is caused by having

contracted cold, the patient should have a warm sitz bath, and hot applications should be applied to the abdomen and thighs. Often a hot vaginal injection will serve a most useful purpose, and a laxative, preferably a saline, will greatly aid in bringing on the flow.

In amenorrhea, delayed menstruation and dysmenorrhea. Ergoapiol (Smith) has acted in my hands in a most satisfactory manner. In scanty menstruation, I found it particularly valuable, and I shall enter in detail about one of a series of cases of this character, later on in this article, where this agent brought on a full menstruation and the general health of the patient began to improve at once. When mental perturbation is a factor in these cases it is manifestly the duty of the physician to have the environments of the patient made as quiet as possible, and anti-spasmodic or nerve sedatives should be added to the treatment.

When amenorrhea is associated with syphilis, the uric acid diathesis or morbid condition must receive correct treatment. My experience with Ergoapiol (Smith) is such that I regard it as an indispensable remedy in all expressions of amenorrhea along with proper remedies for any diseased condition associated in the causation of the affection. Of course those cases where the amenorrhea is due to atresia of the cervical canal, and to any other condition which is remedial only by surgical means, drugs will prove of no avail. The same can be said of instances in the amenorrhea due to a rudimentary state of the female organs of reproduction.

A lady some time ago brought her daughter to my office for treatment of amenorrhea. The girl was 18 years old and visibly anaemic. She had an indifferent appetite and was more or less dispirited. She had enough menstrual flow each month to stain the napkin, but this was all that could be said. I had this patient to take Ergoapiol (Smith), one capsule after each meal, and on going to bed regularly for a month. At the next menstrual period the discharge was without pain and free, and the quantity and color was as natural as she had ever known her menstruation to be. She took Ergoapiol (Smith) in the same way another month, and then ceased to have any further trouble. Her color is good and her appetite is likewise excellent; she is full of spirit, and, in a word, well.

A lady aged 33 had scanty menstruation which had covered the period of a year. At no time in the year had her menstrual period been longer than eighteen hours, but generally twelve hours told the tale. Her menses were not only scanty, but the color of the menstrual blood was pale, and this was attended with a disagreeable odor. This woman had no associated disease that most searching examination could bring out

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he had steadily increased in flesh for the last two years, and to attributed the amenorrhea.

had this patient to take systematic exercise and a dietary that ational, and to take Ergoapiol (Smith) with regularity, a capsule times a day. After two months this woman ceased to take the ly, her menstruation having become normal.

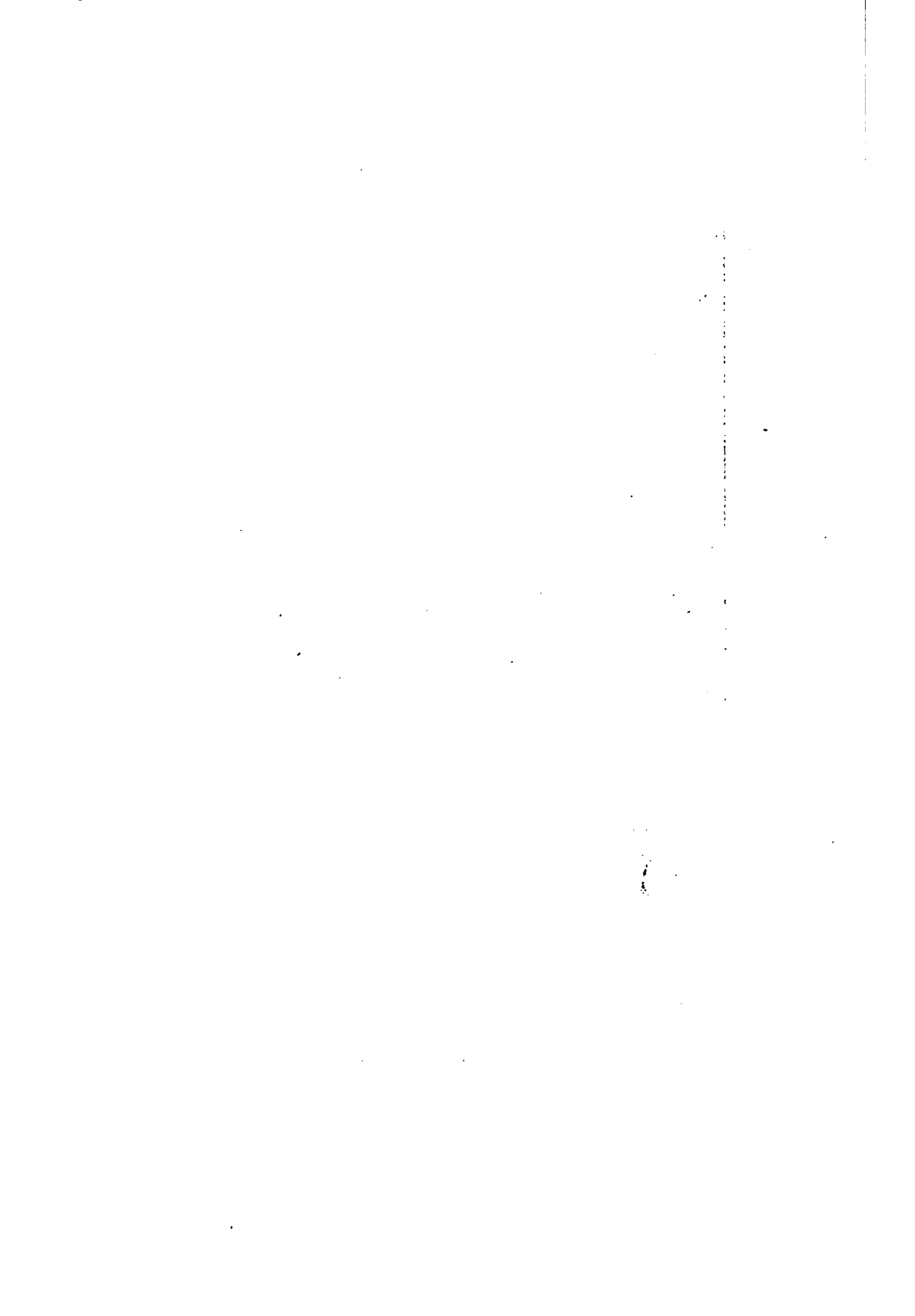
a girl 20 years old was sent to me by the matron of a boarding . She enjoyed good health prior to entering the school, but for ast three months she had not menstruated, and was suffering untly with vertigo and had attacks of hysteria. I attributed the orrhea to change of conditions of life—that of an open life on the to that of a shut-in inactive life. Ergoapiol (Smith) was given each meal for two weeks prior to the day of her usual menstruation. brought her menses on fully. She has since had no further trouble s way.

frs. A. P. L., aged 35. This lady suffered with frequent attacks of che, had backache nearly all the time, and suffered greatly with o. She was the mother of three children, the youngest being 6 old. For the past four years she had constantly had scanty ruation and the blood was very pale. She rarely had the xual flow to continue longer than fifteen hours. I was satisfied he vertigo and all her distress was due to insufficient menstrual and I accordingly put her on Ergoapiol (Smith). She took it gh the mouth, one capsule after each meal; but for a week before pected period she took two capsules instead of one. She was y pleased this time to have a full and free menstruation. Acting r advice, she took the capsules three times daily for two months, his acted in a happy manner and she has now passed an entire und has not failed to menstruate freely.

ly diagnosis was fully confirmed by this women's health being in every way since the establishment of menses on a basis of l.—*The Southern Practitioner*, July, 1902.

LISTERINE DERMATIC SOAP.

The Lambert Pharmacal Company are introducing an exceptionally orious article which will, we believe, be extensively prescribed by cians for use in the treatment of diseases of the skin as the antiseptid detergent properties of Listerine "Dermatic" Soap prove bene-in the treatment of the various cutaneous inflammations and erup-in combating all vegetable and animal parasitic diseases, in diseases : sudoriparous and sebaceous glands and hair follicles, as well as for lief of excessive and offensive perspiration.



HON. SENATOR MICHAEL SULLIVAN, M. D.,
President of the College of Physicians and Surgeons of Ontario; Professor of Surgery, Medical
Faculty Queen's University, Kingston.

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THE CYCLE METHOD OF THE TREATMENT OF SYPHILIS.*

By NOAH E. ARONSTAM, M.D., Detroit, Mich.

Lecturer on Dermatology in the Michigan College of Medicine and Surgery.
Member of the Medico-legal Society of New York, etc.

THE above title suggests neither a new mode of treatment nor a recent discovery, still less the highly vaunted, ephemeral and phantastical seudotherapeutic innovations of our laboratory confreres, but a rational, practical and effective method of the successful management of this malady, so aptly styled by Prof. Morrow a social evil.

It may not be amiss to state, prior to the discussion of the subject proper, that treatment must not be instituted until a positive diagnosis has been arrived at, lest the symptoms be masked and the appearance of determinable lesions thus prevented, hence incurring the risk of a curtailed and inefficient form of treatment and endangering the life of the individual, least of all desirable in this particular affection. The passive or expectant plan must be had recourse to before the advent of the more definite and exact manifestations. There are no certain rules or accurate signs indicating the most opportune or adequate period at which treatment should be begun. Still, when a general adenopathy has come into existence, it is proper time to resort to specific medication; local adenopathy, however, and especially inguinal adenopathy *per se* precludes it. It is absolutely unnecessary to wait for the approach of involvement of the mucous and cutaneous surfaces; as intimated above, the condition of the lymphatic system throughout, should serve as a guide to the prompt institution of treatment.

The author wishes also to insist in this connection upon a sufficiently prolonged course of medication. Much difference of opinion is extant among syphilographers as to the length of time required for the eradication of the syphilitic virus and the establishment of an apparent status of quiescence or permanent non-recrudescence. Upon this point they are at variance. Notwithstanding this, by summing up the different expressions of opinion pertaining to this vital question the inference may be drawn, *that not less than two years of efficient and continuous treatment*

*Read before the Alumni Association of the Michigan College of Medicine and Surgery.

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re enjoined, the third year being devoted to the intermittent plan
peusis, or as some authors term it "intermittent treatment."

soon as the existence of lues is established beyond doubt, no pro-
tion should be suffered, but specific medication immediately in-
ed. The initial sclerema, unless there be a concomitant mixed

1, need not give much apprehension and necessitates but little at-
except strict cleanliness and the application of innocuous anti-
usting powders, as bismuth subnitrate, boric acid and aristol in

tion. A favorite formula with the author is the following :—

R/ Acidi borici dr. 3.....	gm. 12. 0
Bismuthi subnit. dr. 3.....	gm. 12. 0
Aristolis dr. 2.....	gm. 8. 0

t. pulv.

s should be applied twice a day after detesting the ulcer with hot
, which a small quantity of boric acid is added. Cauterization is
ly contraindicated and should only be resorted to when the initial
s complicated by chancroidal infection and threatens to assume a
ous or phagedenic aspect. Cauterization will neither avert nor
te the already existing syphilitic toxin. In conjunction with the
the organism should be brought under the influence of mercury
delay or dalliance, a course which should be persistently and
sly adhered to for the subsequent 18 or 20 months with short
of intermission or repose.

e author desires to acquaint the reader with a method of procedure
for the lack of an adequate terminology, he has designated the
method"— and for which he implores indulgence and forgiveness.
ethod has been extensively used in dispensary as well as in private
, and has been attended by the most favorable results; seldom,
have any recurrences of the malady been observed. The treat-
nsists, broadly speaking, of the systematic administration of mer-
variable, changeable and alternate forms, with slight intermis-
wherein tonics and eliminatives are exhibited. This method pos-
the following advantages over the old, ultra-empirical and crude
' routine :—

It never salivates the individual.

No untoward after effects are discernible.

Gastro-intestinal disturbances are obviated.

Consecutive mercurial dermatoses are not apt to appear.

Its greater efficacy, promptness and permanency.

It is more systematic and thorough.

The danger of recrudescence is minimized.

The tardive or tertiary phenomena are held in abeyance.

SPECIFIC TREATMENT.

1. Metallic mercury should be given the preference in the commencement of treatment, mercury and chalk being a very ideal form of the same. It can be administered in doses of from 2 to 5 grains ter in die, in conjunction with nux vomica and hyoscyamus to prevent griping and some of the easily assimilable ferruginous preparations if anemia co-exists, as follows :—

R/ Hydrarg. cum creta, gr. 63.....	gm. 4.18
Extr. nucis vomicae, gr. 5.....	gm. 0.30
Extr. hyoscyami, gr. 7.....	gm. 0.42
Ferri lactatis, gr. 20.....	gm. 1.30

M. et ft. cap. No. 21.

One, ter in die, 2 hours after meals, and should be continued for 7 days, after which a bitter tonic in combination with belladonna and arsenic in a vehicle of wine of kola is to be exhibited for about three days.

The author makes use of the subjoined prescription :—

R/ Tr. nuc. vom., dr. 1.....	c. c. 4.0
Tr. quassiae, dr. 3.....	c. c. 12.0
Tr. belladonnae,	
Liq. pot. arsenitis, aa dr. 1.....	c. c. 4.0
Vin. kolae, q. s. oz. 4.....	c. c. 120.0

℞. Sig. dr. 2 before meals with water. The three days of intermission are termed the *short period of repose*, in contradistinction to the long period of intermission, to be delineated in detail later on.

2. The protoiodid of mercury is the form next to be employed. It can be given in doses of from gr. $\frac{1}{8}$ to $\frac{1}{4}$ t. i. d., either alone or together with the tartrate of iron and ammonium. The length of time of administration is one week, to be followed by the same tonic as mentioned in the preceding section, for three days, which constitutes another period of repose.

3. Mercuric iodid gr. $\frac{1}{12}$ to $\frac{1}{8}$ t. i. d., is then exhibited in the same manner as above, with a similar period of intermission, wherein tonics are used.

4. Inunctions of unguent., hydrargyri (U. S. P.) or, what is better, mercury vasogen (which is supposed to be metallic mercury with an oxidized hydro-carbon as a base) may be employed. Before applying the same, however, the portion of the skin to be anointed is washed with an alkaline solution, followed by a brisk rub with alcohol, after which the mercurial ointment is thoroughly applied with friction, the most appropriate time for its application being the hour of retiring, and it must be continued for 12 consecutive evenings. Twelve regions of the body are

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as follows: 1. Right arm and corresponding axillary space; 2. left arm and corresponding axillary space; 3. anterior thoracic region; 4. abdomen; 5. right thigh and inguinal space; 6. left thigh and inguinal space; 7. right leg; 8. left leg; 9. both hands; 10. both feet; 11. lumbar and sacral regions; 12. dorsal and cervical areas. Rammes of ointment are used for each inunction, which, as already stated on a previous occasion, must be thoroughly incorporated in the skin.

This completes one inunction course, a warm alkaline bath being taken immediately upon the completion of the course and a three days' repose granted.

Fumigation is the form next utilized. Calomel is the best mercurial preparation which lends itself readily to sublimation, 15 grains a medium dose. Any of the bath cabinets on the market may be used, or one may be improvised. After the mercury has been totally sublimed and has deposited itself upon the integument, the patient is directed to go to bed, taking care not to rub off the film of mercury from the skin surface, until the next morning. On rising, a bath is taken and the skin thoroughly massaged. Fumigation should only be ordered on alternate days for one week. Another short period of repose with purgatives and eliminatives is then instituted.

The next form is the so called "mixed treatment", which comprises the simultaneous use of mercury and iodine, the former as the bichloride or biniodide and the latter in the form of the sodium or potassium iodide.

The sodium salt is, in the writer's opinion, more efficacious than the potassium salt. The appended formulæ were found very advantageous:—

R/ Hydrarg. biniodid. gr. 2. gm. 0.12
Sod. iodid, dr. 3½. gm. 14.0
ft. cap. No. 21. Sig. One 2 hours after meals, or

R/ Hydrarg. biniodid. gr. 1. gm. 0.06
Pot. iodid, dr. 2. gm. 8.0
Tr. gentianae comp. dr. 3. c. c. 12.0
Syr. trifolii comp. q. s. ad oz. 2; M. et ft. sol. Sig. One capsule with water 2 hours after meals.

In cases of coincident anemia, the following combination acts very favorably:—

R/ Ac. arseniosi, gr. 1-5 gm. 0.012
Sod. iodid, dr. 1½. gm. 6.0
Hydrarg. biniodid, gr., ½. gm. 0.03
Ferri lactatis, gr. 24. gm. 1.54
Quininae sulph. gr. 6. gm. 0.36
M. et ft. cap. no. 12; Sig. One capsule 2 hours after meals.

The mixed treatment must be persisted in for a similar length of time as advocated for the aforementioned forms. Another short period of repose is then permitted, during which the tonic medication already suggested is given.

Throughout the entire cyclical period of specific therapeutics, the patient must be warned against indiscretions in diet and general hygiene. The use of mineral acids must be interdicted, while vegetable acids may be allowed, especially the fruit acids; hence the patient may partake of sour fruits, as apples, oranges, peaches and prunes. Pork and pastry must be tabooed from the dietary. Over-exertion, both physical and mental, is to be prohibited. The mouth and teeth are to be kept scrupulously clean and all tartar removed from the alveolar margins and surfaces of the teeth. Alcoholic beverages are forbidden, but a light claret at the table may under circumstances be allowed; stout and ale may be partaken of in moderate quantities, as well as malt extract. Of course, it is needless to say, that all these beverages, if permitted at all, must be used very tentatively. Coffee and tea must be absolutely discarded and smoking or chewing abstained from, lest mucous plaques ensue, manifesting much obstinacy towards treatment. In the eliminative treatment, as will be noted subsequently, the diet may be more liberal and additional concessions made. Balneotherapy, either simple or medicated, should supplement the method of treatment promulgated on the foregoing pages, and should be assiduously encouraged, as frequent ablutions remove much effete matter from the organism and lend the body greater resistive power towards the onslaughts of intercurrent affections.

7. Eliminative treatment. The patient is next put on sod., or potass., iodid in ascending doses for one week, beginning with one minim of a saturated solution *ter in die* and increasing by one minim each subsequent day; it should be taken considerably diluted with water. The best time for its administration is 2 or 3 hours after meals. If the iodides are not well borne, the syrup of hydriodic acid may be substituted in lieu of it, or the pot., iodid may be given in solution *per rectum*, to which a few drops of tr., of opium may be added to allay rectal tenesmus; this may be injected three times daily. The iodides may also be prescribed in conjunction with the vegetable alternatives, as *stillingia*, *trifolium taraxacum*, *rumex*, *lappa*, *sasaparilla*, etc. A repose of three days is again allowed, during which tonics are administered.

8. After this, simple or alkaline baths daily for a week are advised; the various sulphur spas are of decided value at this particular stage of medication.

9. All treatment is then suspended and the patient permitted to enjoy a longer period of rest, or a *medium period of repose*, for about 2 weeks, after the expiration of which the above method is resumed.

INTERMITTENT TREATMENT.

After the elapse of the first eighteen months under the above systematic specific medication, a month's repose is granted, after the expiration of which time the treatment following below is adopted:—

1. Iodin, in the form of the sod., or pot., salt is exhibited in ascending doses for one month, the saturated solution of either salt serves admirably well at this juncture; it may also be given in conjunction with the vegetable alteratives enumerated elsewhere.



Fig. 2.

It is begun by giving one minim of the saturated solution ter in die, well diluted with water, to be increased each subsequent day by one minim, so that at the end of the month thirty minims three times a day are taken. By accustoming the patient to the use of these salts by the above mentioned procedure, a tolerance is established, so that even larger doses may be taken with impunity. The best time for their administra-

on is 2 or 3 hours after meals. A period of intermission, termed the longer interval of repose, is thence allowed, which should not exceed one month.

2. Mercury in the metallic form (mercury and chalk) is then prescribed for ten days, followed by a bitter tonic for four days. For the subsequent 2 weeks all treatment is entirely suspended and the patient is ordered to take frequent baths, simple or medicated. This completes an intermittent or iodine cycle, which may in its turn be depicted by Fig. 2.

The subsequent cycles are similar to the preceding, except that the form of mercury is varied to correspond with the classification of mercurial administration as outlined under specific treatment.

With greater or lesser modification to suit individual cases, and to meet coincident indications and intercurrent conditions as they arise, this constitutes the cyclical treatment of the malady under consideration. Any favorable and permanent outcome can be ascribed to this method of combating syphilis, and very few, if any, cases of recurrence have come under the observation of the author. He is confident of the superiority and advantage of this method over the old, unsystematic and irregular regimen.

The writer will regard himself amply repaid for all the labor incurred in the preparation of this paper, if after the perusal of these pages his system will be given a critical test by his confreres. He shall appreciate all comments and suggestions conducive towards a better elaboration of the subject he is endeavoring to systematize.

164 E. High St., Detroit.

THE DIAGNOSIS OF MODIFIED SMALLPOX.

B- CHARLES A. HODGETTS, M.D., L.R.C.P. Lond.

Secretary to the Ontario Provincial Board of Health.

THE term "Modified Smallpox" given in the title is somewhat misleading, for heretofore the word "modified" has been reserved for cases of smallpox occurring in vaccinated persons only; it has in fact been considered a synonym of varioloid. The continuance of varioloid in a mild form for the past five years has led to the application of the term "modified" to all cases where the course has been considered in any way atypical. By the setting up as a clinical standard a certain chain of symptoms, which has for many decades been considered diagnostic of variola, there has become engrained into medical practitioners the idea

* Read by request before the Ontario Medical Association, 15th June.

that these are the only symptoms which could be found in a case warranting the diagnosis "Smallpox".

The infallibility of this doctrine has like many other of the "sure things" of this world been proved to be fallacious. Like others of the group exanthemata we know, as indeed have all writers of authority upon the subject, that smallpox is capable of every degree of modification, from the initial stage through each successive stage, until that of complete recovery is reached.

That this long continuance of smallpox in so mild a form is perhaps unprecedented is true, certainly as far as modern medical history is concerned, but a careful study of the writings of those who have discussed the subject at any length, cannot fail to convince one that in outbreaks where the mortality was high, atypical (mild cases) were always to be seen. Most cases were severe and so the description recorded corresponded with the type. In like manner one writing now would describe in detail the progress and symptoms of the type of case as observed, incidentally referring to the severe or very mild ones as atypical of this epidemic.

Again the modified cases have for the past 100 years been considered as those upon which vaccination has had a controlling influence, and at this date to apply the term "modified" to a large series of cases upon which the beneficial effects of vaccination cannot claim to have exercised any modifying influence, is most misleading.

It is therefore preferable to consider all cases which occur in the unvaccinated as smallpox no matter of what type, reserving the terms "varioid" and "modified smallpox" for those cases happening in persons who have derived any immunity from a successful vaccination, or re-vaccination, or previous attack of smallpox. The possibility of an inherited immunity derived from vaccination in a line of ancestors as being a factor in the cause of the mild type characterizing the recent epidemic is not substantiated by observations extending over the last whole period of its presence.

For the past five years perhaps no subject has called forth more discussion than that of smallpox, chiefly from the fact that the mild type which characterized the first cases of the disease has been almost constant throughout that period. True it is that individual instances have not been wanting where all the virulent symptoms have been present, but these typical cases have been like cases in the desert, and their appearance has cheered the heart of many an anxious Medical Health Officer whose diagnosis had at last been confirmed, his hope being often realized that virulence would be followed by public alarm, which would result in precautionary measures being taken with more alacrity.

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The diagnosis of the disease under such terms as "Cuban Itch", "Ibipine Rash," "Elephant Itch," etc., required merely passing notice, their use by any physician is to be severely condemned.

Before considering the differential diagnosis, the presentation of a review of the symptoms which have characterised the disease as it occurred in Ontario is desirable.

History.—Some five years ago the first cases appeared in Essex County, and in the following year the disease became widely scattered in lumber camps of Northern Ontario before its presence was known. In instances it came from the State of Michigan. At first considerable uncertainty existed as to the diagnosis. By some it was considered to be smallpox, while others were as confirmed in their opinion that it was *typho contagiosa*, and a number expressed the opinion that it was a new cutaneous disease without a name, and for a time at least the opinion was expressed that it was of a syphilitic character.

This latter opinion was no doubt due to the fact that male adults seemed to be the chief persons attacked, but soon it became apparent that it was not limited either by age, race or sex, and although it spread somewhat insidiously, yet those unvaccinated became its victims when brought in contact with it. Usually it required more than a passing exposure, frequently cases occurred where the contact was but slight. When it occurred in schools, unchecked, it was particularly interesting to observe a period of several weeks would elapse between the appearance of the first case and the general outbreak, the first cases being those occupying seats contiguous to the initial one, it being clearly evident that the infection was of a mild character. A very noticeable feature, and one which was emphasized as the cases became more numerous, was the immunity of those who had been vaccinated, the disease pursuing an almost unbroken course through thousands of unvaccinated persons, at times exhibiting slight exacerbations in those who from some personal susceptibility developed the old fashioned type of smallpox.

Climate and Season.—The disease has continued from year to year with a maximum number of cases in January and a minimum in the summer months. The type presented no variation in the cold of winter as compared to those happening in the heat of summer.

Contagiousness.—It would appear that the virulence of the contagion bore a direct relationship to the severity of the attack. During the early stages preceding pustulation the infection is not as great as subsequently, and the mere entering a room or house wherein is a mild case during the pustular stage, is not always followed by an attack. Often persons would spend days or weeks in the same house with a mild case before they develop it.

I have not known of a case due to convection, indeed on this point I am somewhat sceptical.

Incubation.—The usual period of twelve full days from the date of one receiving the specific infection of smallpox is, as a rule, the correct one, but the exceptions were so numerous during the past five years where 15, 16 and 18 days have elapsed, that for mild cases the period may safely be extended to 15 days. For the reason of prolonged incubation the period of quarantine has been extended to 18 days, and in some of the neighboring states three weeks is the statutory period.

Initial Symptoms.—While in many cases the onset, although slight in character, is often sudden, yet many patients have suffered so little discomfort, that it has been hard for them to fix any time for the onset. Mild and insidiously indeed have been his prodromata, from a passing malaise to headache and backache, accompanied by nausea and vomiting, children and adults alike have had the same experience, and the latter have often followed their usual occupation throughout the whole progress of the disease. Many have described this group of symptoms as simulating "La Grippe" than anything else. The temperature has averaged from 100 degrees F. to 102 degrees F., while the instances have been as many below the minimum as above the maximum quoted.

The fever continues as a rule for 24 hours to 72 hours, although it frequently passes unnoticed by the patient, the temperature drops to normal or subnormal, with the appearance of the eruption, and thus ends for many their sickness, and the usual occupation is resumed. Because the onset is severe it does not follow that the attack will be severe, nor does it hold true that the mild onset will be followed by a slight attack.

The Eruption.—This appears from a few hours to 72 hours after the onset, and consists in the first instance of minute red macules that disappear on pressure. They are not hard to the touch nor perceptibly raised above the surface. The distribution conforms very much to that of the more severe type. of the disease, being more marked upon the face and extremities, than on the trunk. Often within a few hours the maculae become papules when the shotty feel is first noticeable. This is frequently the first stage noticeable in mild cases, and that this time some of them may show distinct signs of beginning vesiculation. Thus it is stated by the patient that they began as vesicles, whereas the correct way to state it would be, the eruption was first noticed when vesiculation began. This is a fruitful source of error in diagnosis and leads the practitioner to call the attack one of chicken-pox.

The rash may appear in one crop but more frequently even in very mild cases, from one to three days may elapse before it has fully come out.

During vesiculation, which continues for about three days, rarely as seen in previous outbreaks, the rash increases in size until many of them become as large as a pea, pearly in appearance and either filled or partially filled with serum. The more typical will be found to be multi-lobular and different to the others, will not collapse on being transfixed with a needle. Some, but not all of the vesicles will present umbilication.

The change to a pustule may begin as early as the fourth day and usually in most cases is markedly noticeable on the fifth day. The rash on the face usually shrinking and drying up into thin crusts are shed from the face and neck often as early as the tenth day. Not so, however, is the course of the lesions on the other portions of the body and the extremities. The course here is prolonged and the pustules present a more typical appearance and on the 6th, to the 8th day of the eruption there will be found a circular pustule presenting a dome-shaped appearance and surrounded by a marked areola. These pustules shrivel and subsequently rupture or are broken, and the contents form a dry crust or they become inspissated—presenting a brownish appearance. Particularly is this the case in the feet and hands where the epidermis is thickened. The stage of incrustation continues for a longer period in the latter case than where simply thin crusts form. In the majority of cases there is no dermatitis and if present but slight. Intumescence if present is not only slight in degree but evanescent in character and lasts for two or three days.

The average duration of this atypical form of smallpox is slightly over 21 days.

The chief difficulties met with have been as follows:—

- A. The frequently mild form of the onset.
- B. The abortive character of the eruption as observed chiefly on the exposed parts.
- C. The entire absence of constitutional depression after the appearance of the rash thus permitting of many persons resuming their usual calling.
- D. The absence of secondary fever even in more markedly typical cases.
- E. The extreme mildness of the infection as shown in many instances.
- F. The brevity of the period of isolation as compared with former outbreaks.

These and possibly a few others of a minor character have thrown many a physician off his guard and led in the past to rather widespread outbreaks in some portions of the Province.

Of the foregoing the abortive character of the eruption is the great source of diagnostic mistakes, for it is found that the eruption when

once out does not pass through the successive stages even in an imperfect manner, but it pursues an abortive course; given a case with a definite number of maculae there will be found to be an aborting of numbers of these, the remainder developing into papules of which in turn a number will also abort before becoming even slightly pustular. It will be further found that the papules have developed into solid conical elevations crowned by small vesicles containing sero purulent or sero-sanguine purulent fluid, which vesicles dessicate early, leaving the solid portion which remains for some time as a warty like excrescence of the skin. This is most frequently noticed on the face but disappears without leaving any permanent disfiguration.

The size of the pustules or the aborted vesicles will be briefly referred to before leaving this portion of the subject; usually circular and of the size of a split pea, yet in many instances it is found that the greater number are smaller in size, some not larger than a good sized pin-head. The apex of many will present a dark appearance similar to an acne though without any marked dermatitis or intumescence. In such cases some few typical pustules will be found possibly on the abdomen or extremities or along the hair line. Again, early rupture of the vesicles or pustules produces, where such has occurred, an irregular outline, somewhat simulating chicken-pox.

The affections with which smallpox of the present type has been, and unfortunately still is most frequently confounded, are Chicken-pox, Impetigo Contagiosa, Pustular Syphiloderm, Urticaria Papulosa and Acne; of these Chicken-pox is the most common, chiefly owing to the fact that the premonitory symptoms have been so mild that the patient has misrepresented them to the physician, and coupled with these mis-statements there is found on looking at the exposed parts only a few, often only one or two abortive vesicles or pustules. The examination is not pushed any further. Both parties concerned are satisfied. The patient particularly so from the knowledge of the fact that isolation will not be necessary, although he may be well aware that had the physician stripped him, an altogether different condition of affairs would have been found on the "hidden parts". The blame is in most instances to be laid at the door of the patient rather than at that of the medical attendant for the mistake, for had the one been honest the other would have been more painstaking in his examination. In Smallpox, believe nothing you hear, doubt much you see on first appearances, but carefully note all that the surface of the body has to reveal to both touch and sight.

The chief characteristics which distinguish Chicken-pox from the present mild form of smallpox are :—

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It is a disease chiefly confined to childhood being only occasional in adults.

It rapidly runs its course in a week, passing through the stages of papule, vesicle and scab often within a few hours, certainly within four hours after the first appearance of the papular rose spot the development develops.

The premonitory symptoms are but slightly marked, indeed are almost wanting altogether.

The temperature accompanies or follows the appearance of the

The vesicles of Chicken-pox are ovoid or irregular in appearance. They attain their maximum development much quicker than do those of smallpox.

The eruption as a rule appears first on the portions of the body covered by clothing.

After the crusts fall off they leave a red instead of pigmented

With these marked differential symptoms it must be stated that many cases of smallpox of the present type occur as to make it extremely difficult to correctly place them. *"It may, however, be stated in general way that a mildly febrile eruption appearing without prodromal symptoms, being distinctly vesicular from the beginning, and commencing to desiccate on the second or third day, should be regarded as chickenpox, and on the other hand an acute exanthem preceded by an initial period of 48 hours in which the temperature was distinctly elevated, beginning as papules and ending in vesicles and vesicopustules even though the period of evolution be short should be regarded as smallpox."

The chief points in the differential diagnosis of Impetigo Contagiosa

It is a skin affection rarely accompanied at any stage of its progress by an elevation of temperature.

There is no initial stage.

It does not begin as a papule but as a vesicle or vesicopustule of the same upon an apparently normal skin.

It appears chiefly on the face, head and hands,—the exposed

It is usually unsymmetrical and superficial and spreads from the periphery, often attaining the size of a ten cent piece.

The crusts are of differing degrees of thickness, are varied in color from straw to a brownish hue. They are friable, crumbling very easily.

A. Welch, M.D., Philadelphia Med. Journal, Nov. 16, 1909.

ily. On removal the base is covered with pus which on healing leaves no scar.

7. Fresh inoculation may occur in the same individual, the infecting material being generally carried by the finger nails to any part of the skin.

Pustular Syphiloderm.—Although few mistakes have arisen from the diagnosis of cases of smallpox for pustular syphiloderm, yet there is a greater resemblance between these two diseases than is generally supposed. This stage of syphilis is ushered in by fever and accompanying pains and aches, very similar to smallpox. There then follows the papular eruption which subsequently ends in the pustule. The chief distinguishing points are :—

1. The absence of the shotty feel of papules.
2. The formation of small vesicles at summit of the papules.
3. The large indurated base of the vesicles.
4. The appearance of the rash in successive crops.
5. Umbilication is absent.
6. The tendency of some of the lesions to ulcerate.
7. Examination reveals other symptoms of syphilis.
8. A History of the initial syphilitic lesion is confirmatory.

Urticaria Papulosa.—In this disease the papules are small, the size generally of a split-pea; in color a dull white. They attain their full size in one or two hours. The initial symptoms are absent.

Acne.—This skin affection occurs chiefly at puberty and the chief points in the diagnosis are :—

1. The absence of initial symptoms.
2. The pustules are acuminate with a black central dot or comedo.

Base is indurated.

3. The face, shoulders and back are chiefly affected.
4. The rash will be found in all stages in the different portions of the body.
5. The chief diagnostic difficulty is found in the rash as it affects the face, as in these mild cases it often simulates acne. An examination of the whole body will assist in clearing up the diagnosis.

There is no necessity to refer to the rashes which happen in the initial stage for in this type of smallpox they do not occur.

ADDRESS IN MEDICINE.—CANADIAN MEDICAL
ASSOCIATION.*

By R. E. McKEONIE, M.D.

R Chairman and Gentlemen,—In asking a member of the profession residing in the far West to deliver the address in medicine, I that a compliment has been paid, not so much to myself, as to the t. To demand that we, living so far away from the centres of learn- from the great teaching institutions of the East, should nevertheless pected to keep ourselves abreast of the times, and in touch with the t discoveries, is surely expecting a great deal; and then to expect one, living under such barren influences, should be able to give you an ess equal to this occasion, containing some food for thought and ling out the pathway of duty and practice, is to look still further for raculous manifestation. But the genius of the West is ever equal to ccasions. It has grown accustomed to the knowledge that the best it in the world grows in our North-West; that our forests can supply hugest sticks of timber known to commerce; that our fisheries can ly the world with illimitable quantities of salmon, halibut and other acies; always the best, the hugest and the illimitable, ever the super- e. So, it is not strange that a strong egotism has developed out here ient even to accept this task, and hoping, but with misgivings, that elf-sufficiency may not suffer in the attempt. Personally, I feel that a t honor has been conferred on me, and I most sincerely thank the ciation for its kindness, and trust that its confidence may not have misplaced.

s to-day we seek to adapt treatment according to the cause of disease, ooking back to the remotest ages, we find the human instinct groping ; the same pathway.. But in the early ages of the race science was own, and miracle was seen in every unexplainable phenomenon. e disease was attributable to the wrath of a good being or the malice n evil one, and treated accordingly. Among the ruder tribes the cine-man has ever held sway; but even in higher civilization we find in Egypt the priests of Osiris and Isis claimed powers over disease; ssyria, the priests of Gibil; in Greece, the priests of Aesculapius; in a, the priests of Jehovah. While these have ceased to exist with the / of their respective religious systems, the ruder primitive tribes have sted. They are found among the aboriginal tribes of Africa to-day, so on this side of the Atlantic. Parkman, in discussing the customs e Hurons, says: "A great knowledge for the simples for the cure of

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disease is popularly ascribed to the Indian. Here, however, as elsewhere, his knowledge is, in fact, scanty. He rarely reasons from cause to effect, or from effect to cause. Disease, in his belief, is the result of sorcery, the agency of spirits or supernatural influences, undefined and undefinable. The Indian doctor was a conjuror, and his remedies were to the last degree preposterous, ridiculous or revolting."

Among the Coast Indians in British Columbia the practice is still kept up, and it may interest you to hear me relate what I saw not forty miles from here only three years ago. In the Indian villages are to be found huge barnlike structures called rancheries, each consisting of one immense room and capable of accommodating twenty or thirty families. Living close to nature, the floor, of course, is mother earth. Rough stalls arranged along the walls, separated by screens of rush matting and open toward the centre, form the none too private retreats of the individual families. Each lights its own fire on the earthen floor opposite, whereon their rude cooking is done. The smoke escapes through the shingles, as there is no chimney, and in the absence of windows the light comes in through the cracks in the wooden walls. I went down one evening to such a place to see a sick Indian woman. It was dusk, and the waves of the sea were lapping the beach close at hand, while dusky children flitted by in the twilight, engrossed in some pastime. On entering the only door in the rancherie, I found it in utter darkness, excepting for a small fire burning at the extreme end of the building. Here was presented a study in light and shade, to have suited a Rembrandt. Around the fire was arranged a circle of Indian women (it is always the women who are closest to the mysteries of nature), while at one side was the patient, too weak to sit up, but supported by a couple of sympathizers. Facing her was the Indian Medicine-man, trying to cure her disorder by directing his energies to overcome the supposed cause of her disease. My diagnosis was tubercular pleurisy with effusion, but my Indian confrere had diagnosed possession by an evil spirit, and as he was in charge of the case, I could only look on. Each woman, with a stick in her hand, was beating on a piece of wood before her, making as much noise as possible, and adding bloodcurdling explosives to the incantations of the Medicine-man, in a vain endeavor to drive out, to scare out, the possessing spirit. But unfortunately this kind comes not forth by such rude wooing. And so, from the gray dawn of time, down to what we imagine is the mid-day splendour of to-day, such forms of practice have persisted through all the ages.

But let us not imagine the air clear yet; the fog is only getting thinner. In other times the sun has attempted to shine through. Five hundred years before Christ, Hippocrates broke away from the old traditions of healing, the supernatural methods, and laid the foundations of medical

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on experience, observation and reasoning. Later his teaching led the school of Alexandria, where positive knowledge was developed by the adoption of anatomic studies; and centuries later, under patronage, the medical sciences reached their highest development in the Middle Ages. But Europe was less fortunate under Christian times. There was a return to a belief in the supernatural origin of disease, and in the practice of supernatural methods to combat it. Retrogression prevailed over progression. Still believing in demoniacal possession, the various phases of exorcism were practised, even combined with practical methods as the following: "To disgust the demon with the patient was tormenting, the patient was made to swallow or apply to the body unspeakable ordures, with such medicines as the livers of toads, the blood of frogs and rats, fibres of the hangman's rope, and ointment made from the body of gibbeted criminals." For myself, I would prefer the rational methods of the British Columbia Medicine-man. Cures effected by relics, by pilgrimages and sacred observances obscured the truth, while even the Divine Right of Kings gave the world the blessings of the Royal touch for King's Evil. All these practices were injurious to the development of medical science, for "why should men seek to usurp divine observances, according to an overwhelming mass of concurrent testimony, had cured hosts of sick folk in all parts of Europe?" But finally the turn came. The discoveries of Galileo, Kepler and Newton had their influence in the sister science of medicine, and investigators made bold to pry into the secrets of life, and learn her vital processes, to seek the true causes of disease and endeavor to find the cure. Relapses have occurred. As the Church opposed the introduction of the fanning-mill because it infringed divine prerogative, which furnished the wind to winnow the wheat from the chaff, similarly, opposition arose to the introduction of inoculation, vaccination, and the use of anesthetics. And as supernatural powers were invoked to cure diseases supposed to be of supernatural origin, so to-day we have the various sects of faith healers, magnetic healers, and what not.

As Carlyle says, "Only what is true will persist. Out of the conflagration of modern criticism truth, like asbestos, will come forth unscathed; but vain theories, gaseous, will be dissipated among the waste forever."

Where do we stand to-day? Have the fogs all lifted and do we all see clearly? Unfortunately not. Investigators to-day are not numbered by hundreds, pursuing many diverse threads of thought, and presenting to the world their conclusions, fully formed or immature, probable or possible, astute, relevant or irrelevant.

The search for the causes of disease still continues as actively as ever, but disappointments are far more numerous than successes. Concerning sarcomata, Stimson, in this month's *Annals of Surgery*, says: "We are absolutely in the dark as to etiology, and no further advanced in prognosis and treatment than were our colleagues a quarter of a century ago."

Dr. Snow, Chief of the London Cancer Research Committee, has come to almost identical conclusions regarding carcinoma. As regards these two classes of diseases, we are, therefore, forced to be content, at present, with increased ability to diagnose them, and have to thank the surgeon largely for the groundwork of this advance.

In 1882, Koch proved tuberculosis to be due to specific bacillus, and in 1890 startled the world with the announcement of a cure. We all remember the reaction, the tremendous disappointment, felt not only by the laity, but even more keenly by ourselves, when slowly, unwillingly, we were forced to admit that our expectations were not realized. Early in 1893, Behring delivered a lecture before the Vienna Medical Society, detailing his experiments on animals with his own special serum, and speaking very hopefully as to the future. Perhaps he, who with Roux, discovered in diphtheritic antitoxin the greatest remedial agent of recent times, will unravel the puzzle.

More recently, Marmorek, of Paris, has staked his great reputation by giving to the world the results of his labors in a new serum, and we can only trust that time will prove that it possesses some definite value. Later still, that our professionally agnostic brethren may not starve for want of food, an Italian professor has annunciated that Koch's tubercle bacillus is not the cause of phthisis, but rather an uncouth octapoid micro-organism of his own finding. Well may the general practitioner raise his hands in despair and wonder what he can believe.

But experience has shown that in tuberculosis, as in other things, prevention is better and surer than cure. Statistics are piling up year by year, adding proof where now none is needed, that, recognizing tuberculosis as an infectious disease and treating it accordingly, a definite gain can be recorded. Education of the public has already been advanced so far that more positive steps should be enforced. Compulsory notification, as in other infectious diseases, proper disposal of infected excreta, disinfection of infected dwellings, etc., should be rigidly carried out, and the same positive results would be attained throughout the country at large as already obtain in the few places far advanced enough to follow this self-evident line of action. A resolution should be passed by the present meeting, urging the various Provincial Governments to introduce the necessary legislation, and I venture to affirm that, coming from so influential a body of scientists, the suggestion would be adopted. And, if adopted, as I have

said, the educated sentiment of the public would not obstruct, but would uphold the action of the authorities. Perhaps this body has taken this action, but until the various authorities have adopted suggestions, I consider it the duty of this Association to yearly rehearse the advice. Then finally will begin an era of diminution, until, as our more optimistic brethren affirm, fifty years will see the extinction of the Great White Plague.

Neilman's pronouncement as to the causative agent of variola still unchallenged: while more recently Mallory, of Boston, has described a protozoan which he has named *cyclaster scarlatinalis*, and which he has a causal relation to scarlet fever. In the winter of 1902-3, Dr. von Kries, of the Kinderspital in Vienna, announced the discovery of an antiserum prepared from a coccus constantly found in the throats of patients affected with that disease. His statistics, covering several hundreds of cases, both mild and severe, were, as such statistics usually are, certainly impressive; but he failed to prove his coccus as the cause of the disease, and the consensus of opinion inclines to believe that the favorable results were due to the combatting of the influences of a mixed infection. The same results can also be obtained by the use of antistreptococcal serum, an agent in other forms of infection, has not the wide use among the medical profession that its virtues demand.

Turning to another field, where surgery and medicine meet we find that definite progress has been made. Numerous operations on the stomach and intestines have shown that ulceration is more common there than formerly supposed. The physician of to-day must not expect to find all the classical symptoms, for we can have ulceration without pain, as we also can have ulceration without haemorrhage. Brilliant results have been obtained in most cases by operative methods, results such as medicine has not been able to achieve. Under these circumstances we have the added responsibility of convincing some of our patients to submit to the risk of an operation, a responsibility which will often tax our courage to the utmost, but which true men, should not shrink when the occasion arises.

In the diseases of the biliary tract, surgery has also disclosed many new facts. The post-operative biliary fistula, in cases of obstruction of the common bile duct, affords a positive means of correctly estimating the quantity and quality of the bile. The use of cholagogues has an established place in medical practice, but now our faith is rudely shaken. Although the term cholagogue has been in use for more than two thousand years, and is as firmly seated as the everlasting hills, recent investigations have caused it to tremble, and it may eventually disappear as did many other remedies in some prehistoric cataclysm. Mayo Robson, in estimating the effects of certain so-called cholagogues, found that the old reliable

calomel caused a diminution instead of an increase in the flow of bile. Euonymin gave the same result, while rhubarb and podophyllin, turpentine and benzoate of soda gave negative results. His conclusion is: "The supposed cholagogues investigated seem rather to diminish than increase the amount of bile excreted." Perhaps the most of us feel like saying as the fox to the grapes, "We did not think they were much good anyway."

As regards cholelithiasis we have also learned a great deal, and have had to revise our views as to etiology, and must consider the typhoid bacillus and the bacillus coli the primal cause for the majority of cases. The French school go so far as affirm that, without infection at some stage of the disease, we will not have cholelithiasis. Legars says; "The infectious origin of biliary lithiasis is proved, for the following reasons: If we have shown that gall stones do not depend on general and obscure humoral conditions, but on a local infectious process, the disorder becomes for the most part also a local matter, and as such accessible to direct local means. If the calculi are once formed, they increase and multiply, and we can still be sure that they are due to a single attack of lithogenous infection. At a given moment microbial invasion of the gall-bladder took place, and these microbial invasions, of intestinal origin, depend on various causes, and may occur in the course of different acute disorders; at any rate the calculous disorder comes from this primordial lithogenous cholecystitis. Once more, it is a complaint of the gall-bladder and ducts, not of the bile, and lithogenous cholecystitis is comparable to many other localized infections, such as appendicitis, for instance. By removing the calculi, or the gall-bladder, recovery may be complete and final. Finally, we find infection not only at the origin of lithiasis, but also at all stages of the disorder; it is the leading factor of the various complications as well as of the prognosis of the complaint."

Deaver says: "It can be emphatically stated that gall-stones are always the result of precipitated salts and tissue debris, following in the wake of bacterial infection, mild or severe in degree. Furthermore, the complications of chronic gall-stone disease, adhesions, ulceration, fistulae, liver and pancreatic disease, are also due to infection." He also says: "The treatment of chronic gall-stone disease, its complications and sequelae, can only be surgical. Gall stones are formed through the aid of infection, and therefore the disease is local and requires local treatment, that is, operation, and not solvents or cholagogues to relieve a condition resulting from faulty metabolism."

Therefore, the same application can be made here as was made in reference to gastric ulceration. We should realize the impotence of medicines. Solvents do not dissolve, and the old treatment was merely that of temporizing, with the hope that Dame Nature would aid our misguided

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expelling the offending bodies through the natural passages. Surgery holds out a positive cure in a portion of cases, but too many of us fear the responsibility of such radical treatment, and our patients suffer from our timidity. Now return to a consideration of the work being done by our investigators. In reviewing their work, not only that of the past but of recent years, we see labor multiplied, mountains heaped up in the attempt to scale the heights of the unknown, until, the results attained, we might be forgiven for enquiring, "Was this so Titanic a struggle?" The causes of disease are so intricate they are reached only after ages of scientific labor. Yet a few have made us impatient of the coming of complete victory. Some have proved to be stars of the first magnitude, others but a few flint sparks to illuminate the truth, whilst many so-called investigators have given no more light than when wax is struck on wax, idle thoughts written on the brain, and now, let us hope, rubbed out. Looking at the workers as constituting an army, one searches for a controlling spirit, one which will concentrate the tremendously never-tiring energies of this mass of workers into a well-aimed assault on some stronghold of the unknown. Modern investigators—to quote a phrase of Carlyle's, "like a hapless servant gone astray—unfit for self-guidance." To give an idea of the varied work being studied, let me quote the titles of a few of the papers published during the year in but one publication, *The Journal of Medical Research*, "On the Appearance and Significance of Certain Granules in the Leucocytes of Man," "The Influence of Certain Bacteria in the Coagulability of Blood," "The Relation of Specific Gravity and Osmotic Pressure to the Bacteriolytic Complement Content of Blood," "The Agglutination of the Pneumococcus with Certain Normal and Pathological Sera," "Cat's Blood: Differential Counts of the Leucocytes," "On the Agglutinating Hemolytic and Endothelialytic Action of Serum in Variola," and so on. I do not wish to speak slightly of the work which these titles of so diversified investigations portray, but I think that if the workers of some one strong school were under one leadership, their campaign planned against one enemy, and their work uncorrelated, more progress would be made in a given time than is now accomplished by the independent, uncorrelated work of all the schools combined. The present view is perhaps too Utopian. The world will "gang its ain way." Our workers will continue to work as before. Truths will gradually be discovered and science will be developed in the medical field as in the other fields of science. As Marconi did not have to wade through all the labor of elaborating the data he needed, but utilized the work of others

in perfecting his discovery ; as Roentgen needed to win but a single step in advance of others in the race to gain the palm, so, too, can we confidently look forward to the appearance of a master from among our members, one who, building with the bricks made by others, will erect the edifice of truth containing the key which will unlock the secrets of nature and give us command over our most illusive foes. We all feel that that day is near at hand, and when it dawns we will join unselfishly, without a trace of jealousy, in crowning that master with the everlasting laurel.

In conclusion, Mr. Chairman, and Gentlemen, I thank you for the patience with which you have listened to this address, and wish you every success in your labors in the Section of Medicine.

ADDRESS IN MEDICINE.—CLINICAL FEATURES AND ANATOMICAL FINDINGS.

By W. F. HAMILTON, M.D.,

Lecturer in Clinical Medicine, McGill University, Montreal.

MR President, Ladies and Gentlemen,—The honor that I have in addressing you to-day is much greater than I deserve. Five years ago it was my pleasure and privilege, in response to an invitation from the Executive of that year 1899, to read a paper before your Association in session at Charlottetown. The kindly treatment received at that meeting and the pleasant recollections of the fellowship with the members of our profession down by the sea, which I have since cherished, played no small part in deciding me in accepting the second invitation received but a few weeks since. To have been asked the first time was indeed a great honor, but to have been asked a second time is, to me, a much greater one.

I have realized for the first time in my life the difficulty, and I had almost said the distraction, that one may experience in deciding upon a subject suitable for such a meeting as this. To give you a resume in the advance in medicine made within the past few years would take you over matter at least as familiar to most of you as to myself. It occurred to me it might be of interest to many of the members to present, in groups, several cases in which diagnostic difficulties had arisen, and to compare the clinical with the anatomical features as revealed by the post mortem examination. I decided, therefore to speak to you upon some *Clinical Features and Anatomical Findings*. Doubtless it has come within the experience of all here to find at an autopsy several anatomical features not anticipated in making the diagnosis during life. It is mainly to such cases that I wish to direct your attention for a brief time this morning.

*Read at meeting of Maritime Medical Association, Halifax, July 7th, 1904.

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upon which my remarks are based is gathered from my
ce during the last ten years in the wards of the Hospital,
my high privilege to be connected. In a few instances I
Dr. James Stewart and Dr. C. F. Martin for permission to

I need scarcely remark with all our improved means
is of internal conditions is often most difficult.

I proud of the advances in our methods of diagnosis. The
acteriological tests, cyro-diagnosis skiagraph and fluoro-
y add, the explorators incision, are all of recent acquisition

They all have their limitations, and those who use them
and most faithfully will not fail to apply the *ordinary*

Sydenham's "Natural History Method" of study, with-
of diseased conditions, was doubtless better than all pre-
i, but it would not have achieved much without
ation of the Blood, Malpighi's work, Histological, on
s, or Morgagni's infective spirit of advance along patho-
leirs as we are in these latter days of the records of these
, and of as much as it is possible to inherit, of the exper-
ners in Medicine, we fall far short in so many matters of
osis and treatment that, were we but a little less optimistic
on the field to quacks, mountebanks, "skilly" women,
apothecaries who, in earlier times as now, swelled the
competitors with whom the honest physician had to
fr. President and Gentlemen, lest I should wander too far
e with an aimless digression, let me address myself to my

many interesting and instructive cases with lesions of the
which have recently been observed, three have been chosen
ther rare anatomical findings—at least when taken with
res.

I developed French Canadian shoemaker, aged 50, came
complaining of pain in the upper part of the abdomen, a
pain over the region of the heart, attacks of shortness of
lessness due to palpitation.

He had done very heavy work upon the farm. He was the
children, and was married a second time, two years before
ervation. He used tobacco in excess, and alcohol in
tics. He had never suffered from rheumatism, chorea, or
ase.

stated, his chief complaints were of praecordial pain,
dyspnoea. After a few days of observing the patient a
diac Dilatation, Myocarditis, Adherent Pericardium, and

possibly Endocarditis, was made. The heart was enlarged upward to the second space on the left and right laterally, on the right almost to the nipple line, meeting the liver dulness at an *obtuse angle*; while on the left it passed outside the nipple line. Peripherally, there was no evidence of arterio-sclerosis. The urine showed a trace of albumin and was diminished in quantity; otherwise it was normal.

He did not react to treatment with rest, purgation, digitalis and morphia. One afternoon at two o'clock the patient complained of a sensation of numbness, extending over the left arm and left foot, becoming general over the left side of the body. A little later the same peculiar sensation was felt on the left side of the face and head. Cheyne-Stokes respiration set in. He sat up in bed, swayed from side to side, turned very pale, and rubbed his left arm and leg, complaining that they were cold. His left arm moved about as if paretic. Within a few hours paresis passed into paralysis. The tongue was protruded to the right side. At eleven p.m. there was paresis of the right levator palpebrae, and the lines of the right side of the face seemed less marked than normal. Weakness was the patient's chief complaint; there was no headache nor convulsion. He died eighteen hours after complaining of the first sensory disturbance. The terminal features of the case seemed to favor Cerebral Hemorrhage or Thrombosis.

The autopsy served to confirm the view of dilation and hypertrophy of the heart; there was no endocarditis. A careful examination of the brain revealed no abnormal features, either in the vessels or brain substance proper; neither hemorrhage or thrombosis.

One naturally asks the cause for such a wide-spread paralysis. A search through many books of reference throws but little light upon such a condition. So far I have found but a brief line or two in Osler's Textbook which appears to bear on the subject: "According to Kolisko, softening of limited areas, sufficient to induce hemiplegia, may be caused by sudden collapse of certain cerebral arteries *from cardiac weakness*."

From the standpoint of exact diagnosis the advantage of a careful bacteriological examination of cerebro-spinal fluid is illustrated by our second case. It is one in which a secondary infection masked the primary condition, and threatened at one time in the course of the post-mortem examination to set aside the original clinical diagnosis. Stripped of details the story is as follows:

W. M., aged six years, was admitted with signs of cerebro-spinal meningitis. The history was in accordance with the clinical features of the case. He was deaf when first seen in the ward. His ears showed nothing abnormal on examination by inspection. A lumbar puncture was done and the fluid thus obtained contained the meningococcus intra-cellularis.

The little patient lingered long after the diagnosis was thus confirmed by bacteriological examination of the fluid, dying 67 days from the beginning of the illness.

When the brain was removed at autopsy the pathologist remarked that it did not present the appearance usually found in cerebro-spinal meningitis. Extensive suppuration was discovered in both middle ears and mastoid antra. The drum membrane and external canals were normal. A streptococcus infection was present, particularly in the middle ear, while the meningitis was due primarily to the meningococcus intra-cellularis.

It would appear that in this case so low did the process of life become after the onset of the disease that ample opportunity was afforded for other infections to develop.

Not the least interesting of those taken from among the nervous cases is that of a quarryman aged 54, who came into the Hospital with pain, tenderness and swelling in the right ankle, headache and general weakness. For four weeks, following a chill, he had suffered with his ankle, and for a shorter time with his right shoulder. The headache had been a common complaint of his, extending intermittently over many years. The patient's family and personal history were good. He had never had syphilis or rheumatism, and he indulged but lightly in alcohol.

He was a poor, wretched looking man, older than his years. The mucous membranes were pale. He had emphysema, with marked arteriosclerosis of palpable vessels, enlarged heart, and an accentuated aortic second sound. There was no albumin in the urine, but on careful sedimentation a few casts were discovered. The right ankle was swollen, tender on pressure, and painful in movement. The nervous system was negative with but few exceptions: an increase of reflexes and an inequality of the pupils, the right being larger than the left contraction of the left. His temperature was normal or subnormal.

The patient was admitted on the 1st of September and up to the 4th of that month he had slept well at nights and at intervals had been troubled somewhat with headaches. On the 4th, at two o'clock in the afternoon, the temperature rose to 101 degrees, and at five o'clock it was 103 degrees. He became restless, irrational, and passed his urine involuntarily. Beginning as a tonic spasm and ending in clonic spasms, a sharp general convulsive seizure of three or four minutes duration supervened, in which the head was rotated strongly to the left. After the seizure the patient was restless for a time and then he gradually became himself again in the course of an hour, when the temperature dropped to 101 degrees. There was no paralysis. Five days passed over and but.

little change was noticed. On three of those days the record is of "no headache;" on the fourth of "slight headache in the morning."

On the evening of the 10th of September, five days after his first seizure, he had a few twitchings about the face, lost consciousness, his muscles became rigid, and there was involuntarily micturition. When he regained consciousness the left leg and arm were almost completely paralysed. The right pupil was much larger than the left. On the following day there was some rigidity of the paralytic limbs. The head was retracted, rotated to the right and the eyes turned to the right. The face was not affected. The patient's mental state was not clear. The reflexes were increased on the paralysed side; Babinski's sign was present. The patient became completely unconscious and died on the morning of the 12th day of his stay in the Hospital.

The diagnosis was not clear. The complaint led us to regard the patient as the subject of an arthritis of a mild type. The marked rigidity and irregularity of his palpable arteries, made positive a diagnosis of arterio-sclerosis and with this a kidney more or less damaged. The patient, however, did not give any symptoms of renal changes, and but little weight was attached to this. The headache was carefully inquired into, and, as we have stated, it was a common complaint from time to time over many years, and even when his condition was at its worst, during his final illness, headache, when not absent altogether, was constantly less marked. Hence, as a diagnostic point it was not regarded as of much value. There was no optic neuritis. He had not been subject to convulsive seizures. The Febrile temperatures with which the convulsion was associated was certainly exceptional, particularly as it preceded the spasm. Viewed, however, in the light of persistent, though mild arthritis, the fever was not unusual.

Realizing the difficulty of distinguishing between haemorrhage, thrombosis, embolism in certain cases of apoplexy, it was felt that such a case was before us. We had a sudden onset, with but brief premonitory symptoms, referable to the nervous system, a general convulsion and no paralytic signs remained. A few days intervened between this and the final convulsive seizure which left the patient paralyzed on the left side, and then coma rapidly supervened. The diagnosis was general Arterio-Sclerosis, Arterio-Sclerotic Kidney, Myocarditis, Left Hemiplegia of Haemorrhagic or Thrombotic origin.

Need I tell you of our surprise when we found a Suppurative Meningitis, secondary to a very small abscess of the scalp, posteriorly in the right parietal region which was covered by a thin scale-like scab, and underneath which a localized necrosis of the outer table of the bone had taken place. On examination a portion of the outer table, of irregular shape,

measuring 2 x 1.5 cm., lay loosely in its place, and beneath it the table seemed intact. Two relatively large veins connected it with dura mater, which was rather thick and opaque. Immediately beneath the most intense purulent meningitis was observed. The inflammatory process was observed. The inflammatory process was widespread bilaterally, and a large collection of puss was found in the median crease, between the inner aspect of the right hemisphere and extending on to the base of the occipital lobe. There was no basal meningitis. In reviewing this case we may remark that the main points were in the presence of haemorrhage, general convulsion, loss of consciousness, deep prolonged coma and marked arterial sclerosis. In the second place a comparison from Gowers, on purulent meningitis, may be recalled, and with this case in view, I am sure its truth will be impressed upon our minds: "The form of inflammation, not even the tubercular, presents greater variations in symptoms and course, in proportion to the intensity of the disease. I have known slight occasional strabismus, slight retraction of head, moderate headache, irregular fever and optic neuritis, to be the only symptoms, although after death both cerebral and spinal membranes were bathed in pus, and the meningitis certainly commenced a fortnight before death." In the case just related we have not even one of these diagnostic features save the headache and irregular fever, which might be found in many conditions.

Another lesson taught in this decade of hospital experience is that one should be slow to consider obscure cases referable to the nervous system as *functional*. One may briefly recall a good example:—

Miss T., aged 35, milliner, came under my care October 30th, 1900, complaining of pain in the back, the left hip, knee and leg. She was of a good frame and fairly well nourished. Her history showed that for five years she had complained of pain in the small of her back, which set in gradually, increased in severity and often radiated round to the front of the abdomen. Tight clothing and stooping aggravated the pain. Four months before she came under my notice she felt pain in her left hip and thigh, so severe as to need morphia for her relief. Then, after freedom from some time, another attack came on, not so localized as before—all over the left hip, thigh, side of neck and ovarian region; the back was comparatively free. There was a sense of weight and pressure in the top of the head, and she felt as if she were too long for the bed on which she lay. Morphia, bromides, sulphonal and codein had been freely administered in before coming under my care.

On examination she was found to be very emotional. There was no limb deformity, area of tenderness, limitation of movement, alteration of reflexes, loss of power, wasting of muscles, nor rigidity of lumbar

muscles that could be detected. At times she would not undertake voluntary movement of left leg, but it could be moved by another without pain. Her complaints were so bitter, her requests so importunate, that despite the view of a functional condition at first held, we gave her occasional doses of opium. Hot air and counter-irritation were tried to no good purpose. She was much improved under the judicious care of a special night nurse—she slept better and without drugs. This period lasted for about four weeks, when the right hip became painful. By this our view of a functional condition was becoming doubtful, and again and again we sought an explanation in signs of spinal or other organic disease. Towards the end of January, after three months of worry and dissatisfaction signs of spinal disease developed. Now the right hip was painful, the left less so. There was a deviation of the upper lumbar spines to the right and a rounded tender mass upon the left.

The course of the attack was rapidly downward, and death ensued as the result of an attack of broncho-pneumonia. The spinal deformity was due to an angio-sarcoma beginning in the body of the third lumbar vertebra, secondary in adjacent bones and in the sternum.

The protracted history of pain—its variability, both as to position and intensity; the disproportion between the complaints, and the function of the parts apparently most involved, and the improvement following upon special nursing, when considered in relation to the absence of all objective evidence, accorded good reason for the view of functional disturbance. It must be remembered, however, as we review the case, that there were no certain stigmata of hysteria, and that the pain was complained of chiefly and most constantly in the left hip. Pain when constantly referred to one place should be considered as far more likely due to some organic cause than to a functional condition.

Two cases may serve to illustrate the difficulty of diagnosis between pericarditis with effusion and dilatation of the heart. In several textbooks these two conditions, it would appear, need scarcely ever be confounded, and in several journal articles the differential diagnostic features are set forth. The experience of not a few trustworthy clinicians, however, serves to show that errors of diagnosis are quite within the range of possibility.

The first case was that of a boy aged 12, who had frequently complained of a sore throat. In the early part of his brief and fatal illness he had arthritis in the ankles and right knee, and shortly after became dyspnoeic and complained of great praecordial distress. The pulse was rapid, very irregular, both in rhythm and in volume. There were signs of fluid in the right pleura; the praecordia bulged and showed pulsation, wide-spread on both sides of the sternum. There was dullness across

the chest at the fifth rib, measuring 16 cm., 7 cm., to the right and 9 cm. to the left of the middle line. Traube's space was obliterated, the heart sounds became weaker, the extent of dullness increased upward towards the neck into the second interspace. The friction rub persisted and death supervened. A diagnosis was made of sero-fibrinous pericarditis with right pleural effusion, and possibly of endocarditis.

The autopsy confirmed the diagnosis of mitral endocarditis and of pleurisy with effusion. There was an acute plastic pericarditis, but no pericardial effusion. The heart filled the greater part of the chest, which measured 18.5 cm. over all—the heart itself occupying 14.5 cm.

The case had several points supporting the view of pericarditis with effusion, e.g., the pain and the friction sound; the increase of praecordial dullness, both laterally and upwards, the cardiac impulse within the area of cardiac dullness on the left and the change of percussion note in Traube's space.

The test of the right line of dullness, upon which several writers lay considerable stress as a help in the diagnosis between dilatation and pericarditis with effusion, fails for obvious reasons in this case, for at the autopsy the heart filled the whole of the lower portion of the exposed thoracic cavity, and was enlarged especially to the right (8 cm. right, 4th rib; 6.5 cm. left, 6th rib).

By this case and that which immediately follows, Rotch's angle sign is not shown to be infallible. Dr. Middleton, writing in the "Glasgow Medical Journal, '99" describes the same condition—dullness in Rotch's angle,—in a case of tri-cuspid stenosis. Upward extension of the dullness fails also as shown by this case, and the one following.

The second case was that of a boy, P. T. 11 years of age, who was the subject of a rheumatic endocarditis and had been under observation from time to time for upwards of four years. When last admitted to the Hospital he complained of severe pain in the chest. His pulse was 140, and there was marked increase of praecordial dullness, both to the right and left, measuring transversely four inches, while the note in the second left interspace was impaired. The angle of dullness between the liver and heart was obtuse. The condition grew rapidly worse, the cardiac dullness increasing from four inches to six and in a few days to seven and a half inches. There was a to-and-fro friction murmur heard over the centre of the sternum, the heart sounds were weak, and the general condition was extremely bad. Believing that the patient was the subject of pericarditis with effusion threatening his life it was decided to punc-

B. M. J., 1896, Vol. I, pp. 817.

Edin. Med. Journ., 1895, Vol. 40, pp. 673.

Trans. Clin. Soc., London, 1875, Vol. 8, p. 169.

ture the pericardium. This was accordingly done. The fourth right interspace, close to the sternum was chosen and three ounces of bloody fluid was withdrawn. The patient died 22 hours after. The clinical diagnosis was pericarditis with effusion, mitral regurgitation and cardiac hypertrophy.

The autopsy showed acute fibrinous pericarditis with adhesions and marked dilatation of the heart with hypertrophy and chronic mitral endocarditis.

Before the patient died it was thought that in all probability the heart had been punctured in attempting to withdraw fluid from the pericardium, and at autopsy it was shown that such was the case. The right auricle had been tapped.

According to Gibson and others the danger of puncturing the heart in tapping the pericardium has been greatly exaggerated. Fearing however, that such an accident might occur in this case, special attention was given to the pulse during its operation, and no change could be observed. According to Sloan (*Edin. Med. Journ.*, '95) and Evans (*Trans. Clin. Soc. Lond.* '75), and Broadbent (3rd edition) puncture of the heart is not uncommon, and has been followed by few serious results. Indeed there is evidence supporting the view that it may do much good, and some have even advocated the operation for relief of greatly dilated hearts.

A small group of pulmonary cases remind us of a few misleading features that may arise in some of our most common diseases.

No. 1 (3512), a male aged 60 years, complained of shortness of breath, cough and expectoration. He had been sick for several years, and cyanosis, anaemia, and emaciation were marked. His fingers were decidedly clubbed; his chest was emphysematous, with no dulness at any part; both moist and dry râles were wide-spread. He was slightly febrile and very weak. The sputum examination was negative to tests for tubercle bacilli. The course of his case was that of gradual failure and he died with a diagnosis of chronic bronchitis, emphysema and general arteriosclerosis.

The autopsy revealed chronic ulcerative tuberculosis of the Lungs, fibrosis, chronic pleurisy, emphysema, etc.

No. 2 (7540), female aged 55 years. Complained of pain in the stomach, gas on the stomach and colic. She had been ill for about nine months with weakness and emaciation. There was an irregular temperature, sometimes febrile and sometimes normal. The chest was long with considerable retraction in the supra and infraclavicular regions. There was dulness over both apices, but more marked on the right with moist râles. The yellowish sputum was very scanty and no tubercle bacilli

were found in it. A diagnosis of chronic fibroid phthisis was made with marasmus due possibly to latent malignant disease.

The anatomical findings were, endothelioma of the right lung; secondary carcinoma of the stomach, etc.

No. 3 (3326), that of a man aged 27 years, whose illness began rather indefinitely some weeks before coming to the Hospital. He complained of cough, blood in sputa, and difficulty in swallowing solids. He was irregularly febrile, weak, emaciated and dyspnoeic. There was dulness in the right base posteriorly; the breath sounds were blowing and moist râles were heard over the right lung. A very few tubercle bacilli were reported as found in the sputum. The diagnosis was pulmonary tuberculosis.

The anatomical findings were those of carcinoma of the oesophagus, bilateral gangrene of the lung, right empyema, etc.

This group of cases serves to emphasize the following well known clinical facts:—

(1) That tuberculosis may be completely masked by the co-existence of emphysema, and in such cases the diagnosis is all the more difficult because of the rarity, and indeed at times, the total absence of the destructive bacillus.

(2) Case No. 2 illustrates the difficulty of diagnosis of malignant disease of the lung as well as the fact that it may often be confounded with chronic fibroid phthisis.

(3) There may be in the sputa other acid-fast bacilli than the tubercle bacillus, a fact that is well known. In case No. 3 haemoptysis doubtless led to the mistake in the diagnosis.

In a group of two cases we have the common complaint—shortness of breath. The dyspnoea was urgent when the patients were admitted and as they illustrate rather rare and obscure conditions their histories may be briefly sketched:—

Case 1, a female aged 65 years had suffered intermittently with shortness of breath for eight years and was regarded as an asthmatic. She was in the wards but a few hours before death, and the clinical diagnosis was Broncho-Pneumonia with Nephritis.

The autopsy served to sustain the diagnosis, but it was found that the middle lobe of the thyroid gland was greatly enlarged and formed a mass which pressed upon the trachea, so that from the middle third downward the lumen of the trachea was but a mere slit from side to side. There was an intense tracheitis, pulmonary congestion and an early diplococcus infection. The lateral lobes of the thyroid were not enlarged and in life the physician's attention had not been called to this region.

Case 2 was that of a man aged 61 years who, in addition to dyspnoea had loss of voice. For two months before coming under observation he had been troubled with cough and shortness of breath, and for four weeks before his voice had been reduced to a whisper. There was a syphilitic infection of several years' standing. He had lost weight. The dyspnoea was extreme with both inspiratory and expiratory stridor. The chest was emphysematous; there was no visible or palpable pulsation, and tracheal tugging was not present. The vocal chords were in extreme abduction, and on phonation the arytenoideus muscle was the only one brought into play, making the rima glottis a very large ellipse. The fluoroscope showed nothing more than an abnormally broad shadow at the upper part of the mediastinum. There was no pulsation discovered on the broadened shadow. The diagnosis lay between an aneurysm of the aorta and malignant disease involving the mediastinum. The absence of tracheal tugging and of pulsation on fluoroscopic examination added to the obscurity of the diagnosis.

At the autopsy the trachea was found definitely narrowed just above its bifurcation, the wall being pushed in and eroded. The left bronchus was also involved. A purulent lobular pneumonia hastened the end. Almost immediately above the valves, the aorta underwent rapid distension. On the posterior wall at the juncture of the ascending portion with the arch and extending behind the orifices of the cervical branches was a large saccular aneurysmal pouch. This pouch, filled with firm whitish clots, projected back and compressed the lower part of the trachea and left bronchus. But, because of its position and of its being filled with clot the characteristic sign of pulsation was not forthcoming.

We may next consider a most interesting case of staphylococcus infection.

W. N., (7762), aged 39 years, fell ill six weeks before he came under our notice with an attack of abdominal pain accompanied by fever. He was told he had appendicitis. When admitted he complained of severe pain in the stomach, loss of weight, weakness and occasional nausea. There was a history of indigestion without vomiting for several years. During the past two years he had taken freely of alcohol in various forms. He was very anaemic, his skin being a subicteroid cast. The blood count showed 3,000,000 red cells, 4,600 white cells, with 55 per cent. of haemoglobin. The various systems carefully examined gave but little direct evidence leading to a satisfactory diagnosis. A few moist rales were heard at both bases, and the epigastrium was slightly tender on palpation. The liver could be felt. The urine held a trace of albumin. The possible conditions uppermost in my mind were, tuberculosis and early cirrhosis of the liver.

There developed gradually during the next four weeks right pleural effusion, ascites, and left pleural effusion, Arthritis of the left ankle, and an increasing amount of albumin in the urine, with casts. The ascitic fluid and pleural effusion were withdrawn in part and carefully examined, both as to cells and bacteria present. Endothelial cells, polymorpho-nuclear leucocytes and a few lymphocytes were present in the fluid from the chest. Numerous cocci were also found. The same forms were found in the peritoneal fluid. A culture taken from the blood revealed the same organism which Dr. Bruere, who kindly did the examination for me, pronounced as the staphylococcus pyogenes albus. From this it was clear that we had to deal with a case of staphylococcus infection. Some ninety ounces of fluid were taken from the abdomen, and about twenty-seven from the right pleura.

At the height of the patient's illness the urine contained casts, cylinders and an increased amount of albumin. There was a marked improvement in all the symptoms when the fluid from the chest and abdomen was withdrawn. The temperature after a few days became normal, the urine normal and one month after the first blood culture was taken in the same was as before and was free from microbes. He made a good recovery.

The source of infection, or rather the site could not be defined. But, it is not infrequent to find this form of infection with cholecystitis and cholelithiasis. In our patient's history, however, no support for this view could be found.

I wish further to remark upon the great advantages and high degree of satisfaction the clinician enjoys when thus associated with the skilled laboratory worker. It is felt that many cases—not widely different to this—pass under the diagnosis of healed tuberculosis of cirrhosis of the liver, or in the event of death when no autopsy is made, die of one or both of these diseases.

The diagnosis of abdominal cases is usually very difficult. With the assurance born of asepsis, exploratory incision is recommended and submitted to with increasing frequency, and in not a few instances it is a short cut to diagnosis. It is to be hoped, however, that the day will never come when, confronted by a grave abdominal case, the physician without the greatest care passes his patient over to the surgeon for exploratory laparotomy.

When one reflects that the diagnosis of appendicitis now thought to be so easy has been developed within the last twenty-five years one need not wonder that other conditions, which by their very *nature* are obscure, yet, remain with but few, if indeed any, *characteristic* features. In reviewing the abdominal cases which come before one in an hospital practice

it is clear that in many of these a diagnosis is impossible without a laparotomy or a post-mortem examination. These we must pass over. There is a group of cases, however, in which we think a diagnosis should be made, and yet an experience with such cases teaches the lesson that our clinical observations and conclusions are often wrong. Cirrhosis of the liver, tuberculous peritonitis and abdominal cancer are among the more common conditions met with in clinical medicine in the diagnosis of which many an error has been made not infrequently.

(1) The man in middle life, after several years of alcoholic excesses,—after a diagnosis of the cirrhosis of the liver, dies of cancer of the stomach and tuberculous peritonitis,—his liver being found free.

(2) A patient of more than 60 years of age with a history of alcoholism, dies of syphilitic cirrhosis.

(3) Another patient with jaundice, a rough, palpable tender liver, and severe abdominal pain, becomes greatly emaciated, and, after losing 60 pints of fluid from the peritoneum by tapping, dies with a diagnosis of cancer of the liver. The autopsy reveals a small cirrhotic liver.

(4) Another patient with no alcoholic habits, but with a history of recent malignant disease in the left breast, and with signs of recurrence in the axillary glands, dies with a diagnosis of recurrent carcinoma of the liver,—while the autopsy reveals an atrophic cirrhosis.

(5) A man passed the middle life with a clear alcoholic history in early life from 18 to 42 years of age, had fever, jaundice and an enlarged liver and spleen. A diagnosis of hypertrophic cirrhosis was made. The anatomical diagnosis was, cancer of the common bile duct, secondary in the pancreas, obstruction in the bile ducts, and throughout the liver, with necrosis of the liver.

(6) Our sixth case of this group is that of a female aged 70. She was febrile; her liver and spleen were enlarged; she had jaundice and haemorrhoids. A diagnosis of mixed cirrhosis was made, which in the light of pathological anatomy had to be revised to read, carcinoma of the pancreas, secondary in liver and elsewhere.

(7) And finally, while considering our abdominal cases, we find a young man aged 27, dying of carcinoma of the stomach, secondary in the peritoneum. The clinical features had been interpreted as those due to tuberculous peritonitis, for he had spat up clear blood and was febrile. There was fluid in the peritoneum, and he had passed some blood by the bowel.

REMARKS:—1. In considering those and similar cases clinically we have taken into account the etiology, particularly where cirrhotic changes were suspected. In that case, where "five to fifty glasses of liquor, all kinds", had been indulged in for years, the liver was free.

The recent work of Boix upon the etiology of cirrhosis of the liver in which he shows that butyric acid, valerianic acid, and particularly acetic acid are active in producing the changes of cirrhosis gives a new view-point for this subject, lessening in some degree at least the etiological value of alcoholic.

II. The specific gravity of the fluid withdrawn from the peritoneum is not conclusive.

III. The amount withdrawn, and frequency of tappings, has not been found to agree with Dr. Hale-White's opinion that in cirrhosis the patient rarely survives more than one tapping.

IV. The findings in the liver clinically may be very misleading. In one of our cases enlargement was made apparent by fluid above it pressing it down, while the organ itself was shrunken and small.

V. Cytodiagnosis promises but little of diagnostic value.

It may be said that a differential diagnosis between cirrhosis of the liver and cancer of the pancreas, secondary in the liver, can have no practical results in the direction of the treatment of those aged persons whose cases we have here recorded. There are few who, on this account, will lose interest in the clinical manifestations of disease. Our system of medical education, provided as it is with ample means for pathological anatomy, teaches the physician to think anatomically, as Charcot remarked years ago when describing the services rendered by pathology and autopsy work. In this connection he says that the question whether "do you cure more patients than they cured of old," is a very indiscreet one, and to it he replies in the words of Behier, "Be sure that practice without incessant scientific renewal will very soon become a belated and stereotyped routine."

It has been felt, Mr. President, that some hardihood was required for one to address one's fellow practitioners as I have done on what might be styled diagnostic errors, yet I have regarded these as among the most valuable of my clinical experiences, teaching me more, perhaps, than many successful diagnoses, and it is hoped that this sketch of some of my observations is not wholly devoid of interest.

THE MEDICAL SOCIETY: ITS PLACE AND EQUIPMENT.

By JOHN HUNTER, M.D.

Physician Toronto Western Hospital.

A writer says: "There is, for every one of us, a place and an equipment that, taken together, insure success. It is our duty to find our place and to use our equipment." The wisdom of this statement may be taken as indisputable. I shall, therefore, with some license, use it as a text on which to base a few remarks, that you will please accept,

*Presidential Address before the Toronto Medical Society, 6th October, 1904.

as an instalment, on the debt which, as president, I owe to the members of this Society for the honor conferred upon me. It has the merit, too, of being a fairly orthodox text, for it can be said that it naturally divides itself into two heads: The Place and the Equipment.

THE PLACE.

The Medical Society was begotten, and has ever been perpetuated, by one of the most meritorious inspirations that govern the physician's life, namely, the desire for more knowledge, wider experience and greater skill. A glance over the names enrolled in the membership of the Medical Society shows the place it holds in the estimation of medical men. There you find the names of men distinguished alike for the highest professional attainments in technical knowledge and skill, and also for the noblest attributes of character. The fact that the Medical Society can gather into it such a class of men, is very positive evidence that it has a place. Another equally strong proof for its right to claim a place is the fact that the progress in the science and art of medicine, is very largely due to the work which has been done in the Medical Society. Where else can papers be presented and discussed to better advantage? The Medical Journal is a great medium for the distribution of knowledge. But which physician, who has listened to the words and studied the play of emotions, as expressed in feature and gesture of some of our great medical teachers, would exchange that experience for a perusal of the same article in the quiet of the library, however interesting and instructive a careful reading might prove to be? Would the Apostles have accomplished as much for Christianity if they had read the words of its Founder, instead of hearing them from His lips? Was it not the impress of a personality that made these men invincible? What surgeon could listen to Lister without receiving an inspiration to do all his work more aseptically for all the days to come? Those of us who had the pleasure of hearing Osler's address at the Meeting of the Canadian Medical Association in Montreal, treasure that occasion as one of the most inspiring of the reminiscences of life. To these two names each one of us could add many others to whom we have listened with the greatest pleasure and profit. But some may say that often they have neither been pleased or edified by the manner in which papers or addresses have been given in the Medical Society. This suggests another feature that may be very briefly referred to, that the Medical Society is a place for moral and social development.

High attainments in technical knowledge and skill may be grievously impaired if associated with irascible tempers and boorish manners, which ruthlessly lacerate those tender feelings that constitute the "woof and warp" of our sentiments. A Medical Society is a school in which

anything incongruous in language or manner is likely to be rebuked and corrected. In what other place do sharp tricks, dishonorable intrigues, or petty jealousies seem so small and contemptible to us as when we are convened in a Medical Society? Here we meet in a quieter and serener atmosphere, where the heat and discomfitures that arise from the friction and collisions of the every-day struggle for existence or pre-eminence are not felt, and where we can estimate more justly the work and worth of our fellows.

Time will not permit me to dwell any longer on this phase of my subject: but I wish *en passant*, to refer briefly to those who are not members of any Medical Society. These men belong chiefly to one or another of three groups: The egotists, who are deluded by the belief that they are the incarnation of all knowledge and, therefore, cannot be taught anything by their fellows; the indolent and indifferent—quite too numerous a class; and, perhaps, the most pitiable of all—those who cling to the delusion that they must cherish a real or imaginary grievance against some member or members of the society. These feel their loss keenly, but still hold that it is their duty to immolate themselves on the altar of revenge. Some may say: "Well, if these do not wish to attend let them stay away, we can get along without them." Could we dispose of these classes in this cursory manner, it certainly would be an easy way to get rid of them. But can we do so? These men are members of our profession, and the old adage holds true in our case as in all others that "a chain is no stronger than its weakest link, a fleet no swifter than its slowest vessels, nor a fortress any stronger than its weakest point." A majority of the cases of sickness falls into the hands of the nearest physicians; and, if any of these be less competent because they will not avail themselves of the help a medical society can render, their incompetency and ignorance imperil life and bring opprobrium on an honorable profession. Have those of us who can speak from experience of the value of the medical society no missionary work to do among these classes who do not attend its meetings? Should we leave egotism, ignorance, indifference and petty jealousies to exercise their baneful influence? Is there any better way to get rid of evils than to expose them? "Is not he who is afraid to see, and dare not mention the wrong-doing of himself and his colleagues, his profession's worst enemy? Should we not govern our own lives and, as far as lies in our power, help others to govern theirs, by the abstract truths that "right is right, wrong is wrong, and duty is duty?" Unless the wisest, most cultured and upright men have erred in judgment, or have been deceived by experience, their actions prove that the Medical Society is the right place for every medical man, inspired with any desire for more knowledge, wider experience and greater skill.

THE EQUIPMENT.

The question of equipment is always involved in the character of the work to be done. Upholstered furniture would not be an essential part in the equipment of a dissecting room. It might represent surplus wealth or a morbid type of refinement, but strong tables and adjustable stools would answer much better. So in a Medical Society, learned papers and discussions on mere abstract theories might exhibit mental acumen, but the record of every day experience would be of much greater utility.

The equipment of a Medical Society, in so far as the place of meeting is concerned and the frequency with which the meetings are held, must be governed by special conditions. The rooms should be centrally situated, suitably furnished, well ventilated and lighted. Experience fully proves that meetings held weekly or bi-weekly are much better attended than those held at longer intervals. The meetings should open at the appointed hour. They should not, as a rule, extend over two hours, as long hours exhaust vitality, and impair the interest in the proceedings. I suppose it is a matter of individual opinion, as to whether or not we should retire immediately after the session is over, or spend a few minutes socially over some light refreshments. Personally, I prefer the latter, as it affords an opportunity for the members to become better known to each other and, as a result, to become better friends.

We come now to consider the most essential part of the equipment of the Medical Society, the papers, discussions and the presentation of cases, pathological specimens, photos, instruments and surgical appliances.

Before entering upon the discussion of these, permit me to make a short digression: for I wish to state as emphatically as I can, that there is an imperative obligation resting upon every member of a Medical Society, not only to attend its meetings as regularly as possible, but also to take an active part in the work. The function of a Medical Society is not to nurture drones and parasites, but to be a school in which all are experts and zealous students, imparting and acquiring knowledge.

PAPERS.

In preparing a paper at least three features should be most religiously kept in view. It should be practical, tersely and concisely written in technical language, and brief. In a society like this one, which includes the whole field of medicine and surgery, the writer of a paper has a great variety of subjects to choose from. When a choice has been made, the writer should strive to imitate the true artist—stamp his individuality on his work. He should never leave it possible for any one to say that his paper was simply a mere repetition of what

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been written in books or journals. Before writing his article, he had read every book and journal that can aid him, but his paper should characteristically be his own as are his features or tone of voice. What he reads and hears should be to the mind what wholesome food is to the body.

The cantatrice transforms her food into musical symphonies that are enchanting, and the statesman his dinner into words that are lustily received by his followers. If this be true of physical nutriment, and it is a scientific fact that, without the proper assimilation of food, we could neither sing nor speak, why not make as great a transformation in mental pabulum? The auditory and ocular centres were never intended to be mere wayside storehouses, out of which the same thoughts should pass again, but rather to be switch-boards, flashing impressions to the psychic laboratories, whose functions are to discover and interpret these impressions, as they come, and then to stamp them with personality and send them forth again to delight others and to increase the common fund of knowledge. It does not necessarily follow that the work of one of us will equal in importance that of a Harvey, a Hunter, a Lister, or a Lister, but it should represent the best that the opportunities of our age, our experience and our mental endowments can produce.

So much for the intrinsic worth and character of a paper, and now a few words about the form and manner of its presentation. An instrument may have considerable value in its design, but be of such poor workmanship that its worth is seriously impaired. In like manner, a paper may show much originality of thought and yet be so carelessly arranged and so poorly read that its real merit is lost to the audience. The writer of a paper should take under his "most careful consideration" the fact that the audience has only a limited amount of time and energy to spend on any paper, and so should be extremely conservative of both. The scope of the subject should be clearly outlined in title and headings, and the language concise and technical. He should exercise all his elocutionary powers, the tone of voice being made pleasant, and the pitch such as to be heard by all present. It is the speaker's duty to make himself heard, and the duty of the audience to have to strain their attention to hear him.

Can one expect an audience to be interested in his subject, when he looks at his face in his paper and mutters away to himself? Papers should be of no greater length than is necessary to present the subject intelligibly. It is as bad to overfeed an audience as it is to overfeed a baby: a long paper, causes a wave of anguish to sweep over the faces of those who have to listen, and also a constant shifting of positions in order that they may be able to endure the affliction and mitigate their suffering in such a way as possible.

THE DISCUSSIONS.

These, like the papers, should bear the impress of the speaker. It is well to be able to quote authorities, but better still if able to qualify these from personal experience. This by no means excludes the younger members from taking part in the discussions : for how often it happens in earlier years that cases are met which furnish an experience rarely, if ever, duplicated. The youngest member may thus be able to contribute something of as great value to the Society as the old veteran can, and, if you will allow a slight digression here; I would say that this is preeminently the young man's age, and I wish to extend to all such a most cordial invitation to take a large share in our work. In doing so I am sure I express the feelings of all, not only of those in the strenuous period of mid-life, but also of those of us labeled with the serener graces of maturer years.

CLINICAL MATERIAL.

In this contingent of our equipment are included clinical cases, pathological specimens, photos, instruments and appliances. However valuable good papers and discussions may be, yet these do not seem to meet all the requirements. We rather long for something that we can see, feel and handle. The appearance presented by the morbid condition; the sounds elicited by percussion or heard through the stethoscope; the sensation produced by touch, can scarcely be overestimated, as aids in furnishing information. In the absence of patient or morbid specimen, good photos are of great service, and no description of instruments or appliances can equal the act of examining and handling them.

I must not violate some of the precepts I have laid down, so will briefly summarize this phase of my subject, as follows:—

The equipments of a Medical Society are :

A home in a central locality, with suitably furnished, well-lighted, properly ventilated rooms.

Weekly or bi-weekly meeting, beginning sharp on time, and of about two hours duration.

Short, practical papers and discussions, bearing the impress of originality and personality.

Presentation of clinical cases, pathological specimens, instruments and appliances.

A large membership, with punctual and regular attendance.

In conclusion, am I not justified in saying that every physician who makes it his business to join the Toronto Medical Society, or one of its sister societies, will find a place and an equipment that, taken together, will insure his success : not always it may be, if judged from the pecuniary standpoint alone, but assuredly success in that far worthier achievement, the ability to do good work.

THE CANADA LANCET.

OPENING ADDRESS OF THE SESSION, MEDICAL FACULTY,
UNIVERSITY OF TORONTO, 3rd OCTOBER, 1904.

By J. A. TEMPLE, M.D., Toronto,
Professor of Obstetrics

President, Ladies and Gentlemen.—I must acknowledge with deep feeling the honor which my confreres have done in selecting me to deliver the opening address to you this session, an honor of which I feel more deeply sensible, when I realize how many among you present are more gifted than I, and more worthy of this distinction; and how one more earnestly desirous than I am of doing my share of the work of publicly presenting the strong position and attainments of this school, and the strong medical arm which we must all feel our University now possesses in the amalgamated faculty.

To-day we enter upon the second session of the combined schools of Medicine, and if the past session be an earnest of the success which we may meet with in the future, we will indeed have reason for congratulation.

The harmony and success of what some were inclined to think an experiment, has been demonstrated beyond peradventure as a decided advance.

We are this year continuing the work for which the foundation was laid last session, the work made possible by the amalgamation of the medical colleges, and the enlargement of the medical faculty, the construction of this building, and the equipment of the laboratories therein contained, presenting a combination of circumstances sufficient in space and equipment to guarantee a medical education for the country which will bring it into the foremost rank of the world. But this satisfactory state of affairs has only been rendered possible by great sacrifices by every member of the medical staff who, in this particular, has maintained the reputation which is the pride of our profession—that progress in medical science is to be made, or where the status of the medical profession is to be enhanced, or where benefit is to be conferred upon those who are to receive the consideration of physicians, such sacrifices must be proceeded with regardless of the sacrifices it entails. The amalgamation of the medical colleges and the fusion of the two medical faculties do not mean merely the formation of a huge medical combine—means far more. It means a unification of medical interests in the province, and their welding with the interests and the life of the Provincial University, and the focusing of its powers, and with all its far and wide-reaching influences to compel the recognition and support which this institution and our profession are justly entitled to demand. Furthermore means obliterating the line of separation which might attach to this or

that graduate of any particular school. It tends to obliterate those influences which separate students and practitioners in their early professional career, and which have in the past sometimes been carried on and continued in after years, when they should long since have been forgotten, and enables the student to avail himself of the best in medical science and example procurable. I hope in future years many of you will see, when this plant shall have reached its maturity as the result of its renewed life, a fragrance and a beauty, which will make the advancement of medical science renowned in all places where that science is known.

In no department of knowledge has the separation of thought from the tangled mesh of scholasticism been followed by more or greater benefits to science and humanity than in medicine. Since reason displaced authority, and demonstration superseded unverified hypothesis, medicine has gradually worked its way into the front rank among so-called natural sciences. Thanks to the method of experimentation, medicine, as an art and a science, has made more advance in the last two centuries and a half than it had made in the previous eighteen.

If this work is to continue and grow it can only do so by the distribution of that knowledge regarding medicine which, when thoroughly comprehended, will appeal to government and people alike, and compel that support which even no higher motives than self preservation prompt. Over and over again it has been demonstrated and proven that the increase of medical knowledge is an asset of value to the community in which it has occurred. Let us stop for a moment to survey some of the branches of our work which more intimately touch the masses of people. I do not propose or claim to be able to present a perfect and complete portrait of the marvellous progress of our craft, but even the dumbest can see some rays of light in the picture which must appeal to them very strongly. No more than half a century ago the unfortunate and overworked, suffering from that direst of all afflictions the loss of reason, was separated, not only by his own but by the mental darkness of his day; and restraint, confinement, torture, chains and fetters, the straight-jacket, terrorization, manacles and excommunication was the treatment of the insane. As his violence increased these were intensified. Once within the door of an asylum his doom was sealed, his life among the damned. But fifty years of progress and advancement have abolished all this, and to-day the bond and the straight-jacket are things of the past, whilst sunshine, comparative happiness, home comforts, the development of restful surroundings, proper nourishment, freedom from care, and the supplying of well regulated pleasure has become the lot of this class of sufferers. This same line is developing still further, and though even to-day the horrors of the past attached to the idea of an asylum for the

ane, may still prevail in remote regions, the very word is being excluded from the language of our nation, and replaced with the pathos and meaning of home, and the conditions created necessary not only to cure, but to prevent the more distressing manifestations, and to eliminate odium which attaches to the very name of the only institution where the mentally unsound can reasonably hope for shelter. Again, when we turn to the department of surgery, and survey even superficially the marvellous progress and attainments of this department of our art, when we stand in horror before the pictures of the suffering, torture, and agonies endured prior to the time of Sir James Y. Simpson; when we read in our literature of the hemorrhage from the amputated stump being checked by application of melting tar and red-hot iron; when we endeavor to enumerate those regions of our body which were forbidden the surgeon's use of the writhings unavoidable in the absence of anesthesia; when we see to-day the results of the ligature and antiseptics; when we read of the craniotomy must be proceeded with regardless of the sacrifices it entails. The success of the abdominal surgeon and the almost fairy pictures revealed by the craniotomy rendered possible alone by the quiet and unostentatious yet unremitting labors of the plodding student, is it any wonder that we should apply for some measure of recognition from governing bodies, from the great mass of the public, who either do not know, or do not understand these great achievements? Rather is it not a wonder that we are inundated by earnest offers to contribute in their own way to extend these great blessings? When we look again at what has been achieved by the great pioneers in medicine in the matter of public hygiene, in improved sanitary surroundings, in emphasizing the importance and value of preventing diseases which are preventable, how there has been almost wiped out of existence some of the devastating plagues so prevalent fifty years ago, how there has sprung up organizations and laws for the benefit of communities, rich and poor alike, and in the saving of human life—the passing of those assets which governments and people profess to be so proud of. We do not marvel that in the great and progressive industries of the world to-day wealth is being directed towards the endowment and equipment of such machinery. We do not have to look far for such examples. Across the line, where we can find many instances, we regret to say almost daily evidences, that the flower and the brilliancy of our Canada has been attracted by the congenial harbors and wider fields afforded for those whose lives are to be spent in scientific advancement so closely akin to our own. If this country is to keep its place, if it is to maintain its reputation and its scientific prowess, two things must assuredly be done. The Government must recognize more fully and perfectly than it has in the past the real commercial value of scientific education and

scientific work; and the creator of wealth must also realize that he owes some measure of his success, and some of the money made, to the great scientific institutions whose walls sheltered the quiet and unknown student in his daily and nightly task laying the foundation for a work, the tangible benefits of which are too often absorbed by what the public recognize as the successful manufacturer. It remains with the Government to do its part in this great amalgamated scheme and realize the necessity at once of endowing such Chairs as Bacteriology, Hygiene, and Pathology, and in furnishing sufficient funds for securing teachers who will be able to give their undivided attention to these all-important branches. It remains for the wealthy merchant to follow the examples of those in the Republic to the south of us, and in his private beneficence give some character and feature to a country growing prematurely old by the consumption of its crude material. The recent generous and munificent gift of Mr. Cawthra-Mulock, I hope will stimulate some of our wealthy citizens to follow his example and give of their abundance. I trust Mr. Mulock may be spared for many years to come to see the fruits of his gift abundantly realized, for to no better cause could he devote his wealth than the furtherance of clinical research and the relief of the suffering poor.

To those of you who have already been associated with us in the past I extend a most hearty and cordial welcome, and also to those who for the first time appear here to-night. I would express the hope that the same devotion to study, which has in the past characterized the medical students of this University, will be fully maintained by the class of this session, and the mutual respect and good-will which has existed in the past between professors and students will continue, developing a kindly feeling and interest in each other. I can assure you, gentlemen, that you have no warmer friends or well-wishers for your future welfare than your professors. Long after you leave these halls your progress in life is watched and your successful climbing up the professional ladder affords us both gratification and pleasure.

The science of medicine requires a wide and varied experience in other departments of knowledge; it is not enough for you to confine your studies to medical works alone, you ought to be well read in other subjects or you are apt to become narrow in your views. The more time you can devote to other branches of science the better fitted will you become to understand the many complex subjects of medicine. The great aim of medicine is the prevention of disease, the preservation of health, and the cure of disease.

Medicine is one of the most difficult studies you can enter upon. To grasp fully all that has been written on medicine is a task not lightly to be entered upon. It will require all your energies and determination to

master even in a most superficial manner its very outlines; yet for all that it is one of the most interesting and attractive studies you could possibly select, and as you proceed step by step its attractiveness and beauty will gradually unfold itself to your mind, and what to-day appears to you as being quite beyond your grasp, you will in time be able to know and appreciate. The elementary branches to the beginner will prove tedious and irksome, and you will often feel discouraged; but persevere, be not discouraged; a mastery of these subjects will teach you the dependence and relationship of the one to the other, and in due time you will be able to put into practice what you have learned in the lecture-room, and the investigation and treatment of disease will soon be appreciated, and what was at one time a hardship to you will afford you pleasure and gratification. It is most important early to acquire the art of doing what you may at the time consider uninteresting work in a serious and determined way.

The first year or two of the student's life is the most momentous time of his whole student career; if he wastes that time it is an opportunity lost forever, he can never recall the wasted hours. If, on the other hand, he avails himself of the opportunities placed within his grasp, he lays a foundation which will ever prove invaluable to him; and when he passes from the class-room to the hospital wards he will never come out of them without having learnt something he never knew before. His future may be either a success or a failure; it rests with himself which it shall be. I am no believer in what is called "luck" or "fortune," but believe every man's success depends on his own steady and persistent labor; his future success is largely under his own control; the truly successful men are those who do their work and do it with all their might. The lazy, procrastinating, waiting man is, with few exceptions, a disappointed man; he waits and waits for something to turn up, but he waits in vain; his life slowly passes away; the opportunity he hoped for never came, and in the sunset of his days he finds himself a disappointed man, his youth spent, his energies dead, his hopes extinguished; he has wasted a life which might and ought to have been better in its success, and yet even then he fails to see he has himself alone to blame. I hope that this may not be the lot of any one before me. If you want to succeed, begin now; let your watchword be "work"; strive with all your might to avail yourself of the opportunities now placed before you, and success will be yours. It is quite true, "The race is not always to the swift or the battle to the strong," that many men possessing more than average ability, yea, even brilliant intellects, have failed, and it is hard sometimes to know the reason why; I think it is because they lacked perseverance, the knowledge of the little things that go to make up the man, perhaps I may call it common-sense.

Enter on your studies with a firm determination; work methodically; lay out for yourself a certain amount of work to be done daily; see that it is done; let nothing prevent your doing it; do not let yourself become careless or indifferent to your work; you may often feel weary, fatigued, or even despondent, but do not let your feelings conquer you, and there can be no question of failure in the end. Success is sure to be yours. Constant and regular attention in the lecture-room is essential. I am thoroughly convinced that didactic teaching is as essential to the student as any part of his whole training. I do not wish to overburden the student with lectures, but I fear there is a tendency in some quarters to ignore their usefulness. This, I think, is a great mistake. There was a time when too many lectures were required of the student. He was compelled to follow the same course of one hundred lectures on one subject twice over—an obvious absurdity. But to-day the College of Physicians and Surgeons has wisely cut the lectures down to one-half of their former number, and perhaps there are still some subjects the lectures on which might be still further lessened; but to do away with them altogether I think most ill-advised. A student in the course of his lectures will every day learn something from the professor which he will never learn in the same manner from his text-book. A carefully thought-out lecture will prove of great advantage to any student who listens attentively and takes notes from it. Attendance in the laboratories, where so much is to be learnt, cannot but prove of inestimable value; it is here you learn what you cannot learn elsewhere, and to-day so much is done in the laboratory, that you cannot afford to lose any opportunity of careful attendance to the instruction given there.

In these days the science of medicine is making tremendous strides, encouraged and prompted by laboratory research, and many a seemingly small discovery may mean a great bound in professional advancement; but whilst the laboratory undoubtedly has its purpose, and the cloister studies of original research may result in invaluable benefit to the medical practitioner, we must not forget the wide field of medical work, where nature plays the part of a cruel and relentless vivisector, and produces many an experiment which you will be asked to interpret, and the results and bearings of which you must forecast with a certain degree of absolute accuracy. In the life of a medical practitioner the laboratory must never be permitted to supersede that larger laboratory, the hospital ward, nor the study of those intricate problems of disease whose relief is the life-work of the true physician, and whose surroundings are often dissimilar in every way from what he might be led to fancy they would be from studying only the narrower feature in laboratory research.

The importance of hospital attendance is of extreme value; here you learn the habit of observation, and familiarize yourself with investigations into the diseased conditions of man. Clinical investigation at the bedside will give you confidence in yourself and enable you to investigate yourself the various forms of disease.

Reading and study is essentially necessary to acquire the knowledge he causes and symptoms of disease, but clinical experience is still more necessary to enable you practically to apply that knowledge. The responsibility that rests on you as a practitioner is very great. To your knowledge and skill will be entrusted many a valuable life, and if you should be ignorant, incompetent, and not prompt and decisive in action, you may perhaps be the means of losing that life, of depriving a family of the support and care of a mother or father whose place can never be filled. If, on the other hand, you are competent, you will have the undying satisfaction, it may be, of snatching a life from the very jaws of death. What can be of more satisfaction to any man than such a reward? No pecuniary remuneration is equal to your own consciousness of the successful discharge of your duties. The grateful thanks of the poor man, who has no other thanks to offer for your services, will be esteemed by you as of more value than the money of him who only values your services at so many pence. The day you are enrolled as a member of the medical profession, that day your responsibilities begin. Until then you have scarcely known what responsibility means; and as you proceed in your professional career, your responsibility continues to increase with your increasing work. You will some day realize the tremendous weight of this responsibility. When, for instance, you stand at the bedside of some stricken and dearly beloved member of a family who have called you in, and who have placed their whole trust and confidence in your skill. The stricken one may perhaps be the head of the family, the breadwinner, upon whose daily work depends the existence of a large family of helpless little ones; or it may be the dearly beloved mother, who has tended and toiled so hard for her children, and whose loss is irreparable to that young family, who wait and yearn for her recovery. Or, again, it may be a child, perhaps the only and dearly beloved child, for whom your ministrations are sought by sorrowing parents, the going out of whose life would crush their only hope, and you stand there entrusted with their full confidence. They will watch your every movement; they will listen eagerly for some words of hope from you; their gaze will seem to penetrate through and through you and to read your inmost thoughts. Upon your decisive action, your skill, the balance is turned, the life is snatched from the grave, the joy and light of that household is once more restored, and you have unbounded satisfaction of knowing that you contributed in no small

measure to that happiness. Do you not think that this is a responsible moment in a man's life? Is it not sad to think, on the other hand, that through ignorance, neglect and carelessness, you may have helped to sever the tender cord that bound that precious life to the bereaved family? We cannot save every life, nor can we expect to; but we are expected most assuredly by our patients at least to commit no gross blunders. To avoid such mistakes can only be done by constant study. The more busy you become the more study is called for; the more constant must be your observation of disease in all its forms. It is then you will learn the value of your attention to your clinical work in your student days. Your teachers have had to learn all this before you. Take every advantage of their well-earned and rich knowledge. They are only too willing to impart it to you; but you should realize that they have acquired that knowledge by hard work and untiring devotion to their studies.

The practice of medicine demands of us the greatest devotion and self-denial—and not unfrequently true heroism. How seldom does the medical man receive proper recognition for acts of the truest bravery performed in the discharge of his duties? It is not in the din of battle, or the excitement amid the roar of cannon and shouts of the victors, that he is called upon to do some act of bravery, but in the harrowing hush of some dread disease or epidemic, that the physician daily takes his life in his hands, and goes in amongst the sick and dying even where the nearest relatives shrink from going. There he is to be found, ministering to the suffering, soothing their last moments with his presence, never thinking of himself or the danger he is exposing himself to, but only of the faithful discharge of his sacred duty. How many noble men in the past have, under such circumstances, sacrificed their lives in their endeavors to stem some dread epidemic, to find out some mystery about the disease that is rushing over the land. History tells us of many such noble sacrifices, but they are soon forgotten; no monument is raised to their names to commemorate their noble, heroic deeds—such public praise is kept for the soldier alone—and yet I claim their bravery was equal to the bravest act ever done on the field of battle. Follow the surgeon on the battlefield. Where is he to be found but in the very foremost post of danger, in the very firing line, amidst the shot and shell falling thickly around him, calmly ministering to the needs of those brave fellows who lay down their lives for their country? He heeds not his own danger; where duty calls him there does he go unflinchingly to do that duty. But it is seldom we hear of him as receiving rewards equal to his brother officers. Of course, I do not say that all are overlooked, but of the many who deserve recognition and honors, few, indeed, receive their rightful share. In the great war at present engaging the fascinated attention of the whole world, the surgeons must of necessity be doing an immense deal of courageous work.

not only on the battlefield do they toil, but long on into the weary hours of night they must continue their labors when other soldiers are taking their rest. The fearful amount of disease that must at present be raging amongst those two mighty armies engaged in mortal strife, must tax the strength of the surgeons beyond our conception. If occasion should demand of any one of you present to risk your life in the discharge of your duties, I know you will never shrink from that duty.

Truthfulness and loyalty must at all times characterize your life and actions. Be loyal to your King, your country, your profession and yourselves. Never be tempted to do a mean thing that would bring discredit to any one of them; you have not been so taught in the past, you can find excuse for so doing in the future. Some day in the near future you will come to this great university to seek at her hands the highest gift she has to give, viz., her diploma. I tell you, gentlemen, if she could foresee that you would some day tarnish her honor by some dishonorable act, no disbursement, however great, would tempt her to entrust you with that diploma. She looks to you to help build up her reputation and not drag her honor in the mire. If your only object in seeking admission to the ranks of medicine is to gain wealth, you will be doomed to disappointment. Now, indeed, are those who succeed in that direction. You can at all times, by strict attention to your studies, make a moderate competency, comfortable living, but not more than this.

It is only the charlatan and quack who amass great fortunes out of the too credulous public. The public are only too ready to read their glib advertisements and ludicrous promises to cure all ills human flesh is heir to. Few, apparently, ever stop to inquire into the truthfulness of their glowing promises. The public press of this city teems with such advertisements that are simply disgusting, a disgrace to our public prints, and I cannot understand why such advertisements are permitted in their midst—why any respectable newspaper will permit them on their pages.

If the profession has to maintain its high position, truthfulness and honor must reign supreme in all the dealings of its members. Tact may be important, but tact, when incompatible with truthfulness, is deceit pure and simple, and whilst expedience may be employed, remember it must never intersect the straight lines of right and wrong. The young doctor embarking in his profession meets many difficulties of a financial order, and great are the temptations he may be called upon to withstand—temptations which might lead him from the strict path of professional rectitude. I would remind you that lapses from moral or professional rectitude are never profitable. In the majority of instances they are wholly and completely ruinous; and whilst one might fancy they would afford temporary relief in cases of stringency, they all lead to one central pit of everlasting

and complete professional failure. Two wrongs never make a right. If your colleague and competitor resorts to unprofessional action, it does not justify or excuse you in similar conduct. Let your profession be your highest ideal, let its influences be ennobling, and though failure encounter you, you will at least have the satisfaction of knowing that you have done your best to maintain its true ideal.

The establishment of a post-graduate course here during the past summer is a step in the right direction, a want long felt. The usefulness of a post-graduate course has been proved beyond measure by the success which has attended these post-graduate schools in Berlin, Vienna and New York, and I venture to say it only wants time to prove the same of our own. We have the material and the men to make post-graduate work a success, and practitioners throughout our province will not be slow in availing themselves of the advantages to be gained from attending for a few weeks from time to time a practical course on some of the various clinics to be given. It will be nothing but practical work, hospital and laboratory work. After a man has been in practice for some years, isolated, in many instances, from even the advantages of a neighboring practitioner, practically entirely by himself, the advantages to be derived from returning once again to the hospital and laboratory can not but be of immense advantage to him.

The progress our profession is making in educational matters ought to be a source of great gratification to us all. The preliminary education required of our students prior to entering on the study of medicine compares favorably with the Old World. Indeed, we even ask more of them than in many other places. The elevation of the standard of education tends to elevate our profession and to draw to its ranks a better class of students, and providing the standard is not raised too suddenly and beyond our requirements, no harm can come of it. Wherever possible, a liberal education should always precede professional education and training. That is, a student should be a Bachelor of Arts before he enters the medical department of the university. A liberal education fosters mental alertness and readiness of mind; it broadens one's sympathies and one's outlook upon life and the world; it stimulates the imagination and enables a man to adjust himself more easily and quickly to new conditions and unexpected complications; and it increases one's knowledge of human nature—a most essential knowledge for the medical man to possess. The student who is liberally educated, who has imagination and originality, will never be in danger of regarding his degree in medicine as merely a bread-and-butter degree. To do his work honestly and well is his first consideration. His income, though a very important consideration, will ever be a secondary consideration to the man of wisdom and honor. He who puts income first will never achieve success in the best sense of that much

abused word. I cannot too strongly impress this fact upon my young friends. Nor can I impress upon them too strongly the necessity of being reading men, not only now, but all through their lives. The gift for reading is a priceless gift. Few have it by nature, but fortunately it can be acquired. The world's great men have invariably been great readers. To be well read, not only in one's profession or business, but in general literature, as well, to know the great writers of old time and the wise ones of to-day, gives a distinction and a character to a man which cannot be otherwise attained. It is one of the greatest antidotes, too, of premature old fogeyism of which I know. A doctor's life is apt to be a distracting one unless he has a firm hold on his mental machinery, if I may use such a phrase. He is called hither and thither at all hours of the day and night, and unless he determines to read a certain amount each day, and resolutely adheres to his decision come what may, he is only too apt to fritter away his precious spare moments, and so lose his grasp on things. The use a man makes of his leisure time largely determines what manner of man he is, and what he will become. There is scarcely any pleasure comparable to the sense that one is "growing" mentally as the days slip by. Would that the spirit of self-perfection were more prevalent among us all!

Those who are gathered together here this evening are not all members of the medical profession or preparing to become members of it, not all alike interested in its welfare and reputation. Much that I have said will, I fear, be of little practical concern to the laity at large, yet there is no other profession in whose well-being and reputation the public is really so deeply and practically concerned as in the medical profession. To every man, woman and child in the community the standard attained by this profession is of immense moment. Disease is no respecter of persons. No one knows how soon he may find it necessary to summon a physician to his bedside. No individual can afford, then, to be indifferent to those things which make for a skilful and learned and highly efficient medical profession. The law of self-preservation, if no other, would point out the folly of indifference. Yet for all that, and in spite of the greater prevalence in these present days of the altruistic spirit, we cannot say that the present state of public opinion in Canada with respect to the value of professional instruction of high university rank is what it should be. It may be objected by some of my hearers that it is very difficult to know what the state of public opinion is on this matter; but it may be inferred from the difficulty the profession has in arousing the active interest of our public men in medical education. When public men are difficult to interest in any question, it is generally because they imagine their constituencies are not interested, and the collective constituencies make up what is called public opinion. Without an active public opinion in favor of the

highest possible standard in medical education, it is almost impossible to maintain such a standard. When the mass of the people appear to be hungering for quacks and quacking and patent medicines, a strong public opinion in favor of education of any kind is scarcely to be expected. On the earnestness with which the Canadian public regard education in general, and on their consequent willingness to spend money on it depends in large degree the standard which will be won and maintained in the Dominion. We should allow no country to surpass us in advanced subjects of medical instruction. I have no hesitation in saying that the standard of medical education in a country is one of the most sure, if not the surest, of tests for judging the intellectual status of its people, the stage it has reached in civilization. Disregard for human life is invariably a sign of a low civilization. Moreover, money spent on education is a magnificent investment for any country. There is none better, let our politicians flatter us as they may. It is an investment eloquent of the wisdom of the ages and of to-day. You cannot estimate a nation's greatness merely by the number of bushels of wheat it exports, or by its miles of railways and canals, or by its lines of steamships, or by its coal, its iron, its gold, or by its forestry. Yet, when our orators would tell us what a great people we are, what very fine fellows we are, it is on these things they dilate. No! a nation's greatness is weighed in balances more delicate than those that weigh material things. Its standard of greatness, of success, cannot be measured in dollars—so many dollars, so much success. That country promises to be the greatest which most clearly recognizes the indisputable fact that of all subjects deserving the serious consideration of the people, education is the most important, moral and spiritual, of course, as well as material. Buckle, in his well-known "History of Civilization," tells us that the acquisition of fresh knowledge is the necessary precursor of every step in social progress, and must itself be preceded by a love of inquiry and research. It is not enough for us to be passive recipients of the accumulated inherited thought of the ages gone before. A nation to advance must make original contributions to knowledge and learning. A profession to advance must likewise make original contributions to knowledge and learning. It cannot stand still. To keep medical instructions abreast of medical progress the professor must lecture on what he is doing, on what he is by research discovering, and not on what other people have done or discussed. Do our public men, and the power behind them, recognize this fact? Are they doing what they can and should do to promote liberal education and the highest professional training? Do they realize that the one great and chief office of education should be to call forth and develop whatever spirit of originality, whatever element of genius, may lurk in the mind, and that this cannot be accomplished without our students acquiring the methods and habits

of scientific research, and enjoying opportunities for the prosecution of such research, and abundant facilities in the way of libraries, museums and laboratories? Is all this realized by our public men and by the people who pick them out from their fellows and send them as representatives to parliament? There can only be one answer to this question, but I will leave it to you, ladies and gentlemen, to determine what that answer is. The emphasis of public opinion in Canada cannot be said to be laid upon things of the mind. Observe the men picked out for honors by the multitude—the crack shot, the skilful oarsman, the valiant slugger. Were it otherwise, the saving remnant among us who prize the things of the mind and are jealous of the intellectual reputation of our country, would not be compelled to move heaven and earth to squeeze a few dollars out of the public coffers to promote the best interests of higher liberal and professional education in the country. And if the money is voted, it is grudgingly voted, not in the belief that a splendid investment is being made. In reading the various reports of the members of the recent Mosely Educational Commission, nothing impressed me more than the intense belief of the Americans in education, the enthusiasm for it which is everywhere manifest, and the consequent willingness of government and people to pay for it, the amazing liberality of their wealthy men in promoting higher education, both liberal and professional. It is at least one characteristic of our neighbors which we can all admire without reservation. They have more money than we have, but they should not have more enthusiasm for learning and culture. I am an intense believer in the ability and stability of my own people. We have few failures in the medical profession in Canada, and fewer still who slide down hill and eventually join that unhappy class popularly known as the "submerged tenth." My own experience leads me to believe that nearly every one who comes to our medical school has enough of the right stuff in him to enable him to be trained and instructed, and sent forth from our halls a good physician or a good surgeon. All cannot be great successes. Clever, successful men are, to a large extent, born, not made. But fresh and living and stimulating education, opportunities and facilities in the way of libraries, laboratories and museums for independent study and research, can go far to insuring a man's success—character and some native ability and aptitude for medicine being taken for granted. For these reasons I appeal to our public-spirited citizens, to those who appreciate the high value of the coherent and civic conception of education, to aid by their personal influence the creation of a public sentiment in this country more in favor of intellectual progress, of intellectual independence, more in favor of promoting the higher interests of professional learning, and chiefly of that profession which comes home inevitably to everyone sooner or later, the profession which, as I have said, is in many respects the criterion of a coun-

try's civilization. May I venture to go further and to say it is the duty of everyone who has mind enough to realize its importance, thus to exert his personal influence? The word "duty" has not always an agreeable sound, but it is, as the late Bishop Phillips Brooks once remarked, the one thing on earth that is so vital that it can go through death to come to glory.

Before I close I wish to offer some few remarks embodying the main reasons which induced the old Faculty of Trinity Medical College to join with that of the Provincial University. I regret with all sincerity the passing away of Trinity Medical College; she has done noble work in the past, and her record was one of continued success; her graduates, numbering upwards of two thousand, are scattered over the whole world. Many hold positions the foremost in the ranks of the medical profession; they are to be found in our legislative halls and in positions of public trust, and although Trinity Medical College exists no longer as a teaching body, yet her reputation survives and her graduates, from their high and distinguished positions, testify to the liberal education which they have received at her hands. Our faculty, however, felt that the progress of medical education to-day was such that its demands could not any longer be supplied by private enterprise or by proprietary medical schools. The use of public and private funds is essential for the advancement of our science, and we could not expect these so long as we existed as a private corporation. We amalgamated relying on the hope that we will receive both government and private assistance, such as is now so generously given to McGill and other great universities throughout the United States. Again, amalgamation was in a degree imposed upon us by the attitude and earnest desire of Trinity University, of which we were indirectly a part. For some years past we knew that federation with the Provincial University was the policy of Trinity University, and we realized that it would take place, and upon its consummation leave our students practically without a place for graduation, the only other places being London and Kingston, which had their own medical faculties. The Provincial University offered us liberal and honorable terms of amalgamation, assuring us that the professional staff of teachers, the graduates and undergraduates, would receive generous treatment. We realized that these were advantages which later on we might not have been able to secure. By the arrangement which has been entered into, all the graduates in medicine of Trinity secure enrolment and status in the Provincial University, enjoying the same rights as her own graduates in the selection of representation to the senate and governing bodies of the University.

In conclusion, I can but thank you for your patient hearing, and wish you all the most abundant success in the honorable calling which you have selected for your life's work.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

THE CHEMICAL PATHOLOGY OF GOUT.

In the section of Pathology of the British Medical Association a paper was read by Von Noorden, in which some variations from the accepted views were expressed as, for example, the general metabolism of the gouty is not always sluggish, the oxidising power does not differ from that of healthy people, but there are profound differences in the metabolism of nitrogen. Uric acid originates from the nuclein of the body and of the food, about 50 per cent. of the uric acid produced appears, the other purin substances which accompanies it are not of importance. Sudden rises in the excretion of uric acid are not confined to gout, but the rise of uric acid after the ingestion of purin substances seems to be delayed in the gouty.

Gouty deposits consist of sodium urate, uric acid is a poison determining inflammation of the tissues, but only in a marked concentration, the solid needles do not irritate the tissues, they are deposited probably before the attack and dissolved perhaps by phagocytic action, the solution causing the inflammation. As a hypothesis Minkowski puts forth the suggestion that in gout substances of a kind that bind the uric acid firmly and make it easily soluble and easily excreted are formed in too small quantities both in the blood and in the gouty foci.

Therapeutically the dietetic treatment consists in avoiding all substances which contain excess of purin bodies. Alcohol is very injurious, the alicylates are very powerful agents but are dangerous; alkalies in any form are useless, in true gout they cause a diminution in excretion, that is an increase in the retention of uric acid; the saline waters are the most useful, notably the Homburg Elizabeth Spring, which long ago enjoyed a popularity founded on empirical knowledge of its virtues.

CANCER OF THE PYLORUS WITH JAUNDICE.

The *Journal des Sciences médicales de Lille* for Sept. 10th has a report of a case of cancer of the pylorus accompanied by icterus which simulated an affection of the biliary passages. The patient was a woman aged

50), the history was that of digestive trouble for a year, with sensations of uneasiness after eating, flatulence and loss of appetite; this was succeeded some time later by vomiting after eating, and about a month before admission the icterus appeared and increased in amount accompanied by nausea with pain in the pit of the stomach but not colic.

Examination revealed an acute jaundice, slight enlargement of the stomach, liver of normal size and not painful upon pressure, no induration or enlargement could be detected by palpation. The diagnosis rested between a number of conditions but the progress of the disease soon pointed to a neoplasm, though it was difficult to decide whether it was primary in the stomach or the liver. It was finally diagnosed as cancer of the pylorus with extension to the biliary canals and this seemed to be well supported by the physical signs, but autopsy revealed a cancer of the pylorus with extension to the liver making such pressure upon the biliary canals as to produce the icterus.

RUPTURE OF ANEURISM INTO THE PERICARDIUM.

In the Johns Hopkins Hospital Bulletin, May, there is a report by Gilman of two cases of multiple saccular aneurism which ruptured in the pericardium. They were interesting in showing in both cases a certain amount of organization of the clot, in one case this process had gone on to some considerable extent, showing that the rupture had taken place some time before death, and that attempt had been made at spontaneous cure.

GENERALISED LEAD PARALYSIS.

In the June number of the *Johns Hopkins Hospital Bulletin*, Thomas reports a case of generalised lead paralysis from Dr. Osler's ward. A man 46, worked as an enameller for two weeks, when he noticed the first symptoms in the form of a weakness showing itself first in his legs. There was nothing of importance in his family or personal history apart from a free use of alcohol. The weakness spread so rapidly that in a week he was helpless; there was no history of abdominal pain or severe pain in the limbs, though certain of the joints were painful, and he was for some days delirious. On admission, patient was pale and sickly looking, blood count gave reds 3,736,000, whites 3,100, hemoglobin 40 per cent. There was no involvement of the cranial nerves or of the fundus, the muscles of the neck were fairly strong, but below that almost all the muscles were paralysed. The reaction of degeneration was

present in the paralyzed muscles, the deep reflexes were all lost, and sensation was everywhere acute, while firm pressure on the arms or legs caused pain; the bladder and rectum were unaffected. The picture is one of a typical, severe, multiple neuritis, the distribution is not typical for lead poisoning, but similar cases have been described.

RIGOR MORTIS IN STILL-BORN CHILDREN.

In the *British Medical Journal*, Sept. 24th, 1904, Parkinson discusses this question in the light of a number of cases in his experience, and concludes :—

(1) That rigor mortis may occur in utero and (a) may pass off before labor terminates, or (b) may occur during labor and so hinder it and continue after delivery.

(2) That in deaths during the later stages of labor, where the child is expelled soon after death, rigor mortis may set in afterwards.

(3) That in all cases the character of the rigidity is the same, and that whereas in children that have been born alive the rigidity is that of ordinary rigor mortis, and the limbs stiffen in the position in which they may then be lying, in children still-born the rigidity always takes the same form, and the limbs although lying loose and limp, are drawn up more or less into the position they took in the uterus, and even if the rigor mortis had passed off in utero before delivery, there would be evidence by pressure marks, or the natural tendency of the body and limbs to adopt the intra-uterine position that this has occurred.

(4) Rigor mortis does not accompany still-birth always, but where it is not present there is no difficulty in deciding the fact from the signs of decomposition present. The mode of death probably influence the rigidity in still-births as it does the rigor mortis of adults.

The importance of these conclusions in their bearing on the determination of live-birth is very apparent.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division : Surgeon Toronto Western Hospital.

DISARTICULATION AT THE KNEE AND ELBOW BY CIRCULAR INCISION.

In the *Scottish Medical and Surgical Journal*, September, A. G. Miller, of Edinburgh, describes a method of disarticulation at the elbow and knee by circular incision with the limb held in the extended position.

The cicatrix in a circular amputation is said to be usually central, and to be apt to adhere to the end of the bone. In circular amputation at the knee and elbow, with the limb extended, the cicatrix is not, and cannot be, central. It is well up on the flexor aspect, and there is no chance of its becoming adherent to the bone. This result is due to the unequal retraction of the soft parts which takes place on the flexor and exterior aspects, and this inequality is made certain by fully and forcibly extending the joint before the circular incision is made. This circular incision is made below the condyles— $1\frac{1}{2}$ inches in the arm and $2\frac{1}{2}$ in the leg—down to the deep fascia. The skin in the flexor aspect at once retracts considerably, and the extensor flap is dissected up as far as the head of the tibia in the leg, and to above the olecranon in the arm, and disarticulation is performed from the front of the joint.

The method is practically a utilization of the natural tendency to unequal retraction of the soft parts at the elbow and knee to frame a long flap, by the simple performance of one circular cut.

The writer does not claim this is a new method, but recommends it as an adaptation of an old method, and claims for it the following advantages besides the ordinary well-known and recognized advantages of a single long skin flap and of disarticulation:—

1. The procedure is simple, is easily and quickly performed, and there are no elaborate details to remember.
2. The skin flap from the extensor aspect is well accustomed to pressure and to the situation in which it is ultimately placed over the condyles.
3. The cicatrix is in a most favourable position.
4. Much tissue is not required. The operation is therefore suitable for both primary and secondary amputations.

A SIMPLE METHOD FOR THE REDUCTION OF LUXATIONS OF HUMERUS.

In the *American Journal of the Medical Sciences* for June, E. Boulton describes the following method of reduction as being applicable to all cases of dislocation of the upper and of the humerus:—

The surgeon stands behind the patient, manipulating with the hand which corresponds to the side upon which the lesion exists. The hand of the operator is practically closed, the thumb extended and the wrist pronated.

The ball of the thumb is placed below, against, and parallel to the margin of the scapula on the axillary border, just external to the inferior

angle. Firm pressure is exerted and the wrist is slowly and steadily supinated, exerting pressure upward and backward, thus pushing the lower angle of the scapula upward toward the median line. The lower lip of the glenoid cavity is so depressed that the head of the humerus slips back into place. In the subspinous dislocation, where reduction fails by this method, pressure may be made upon the head of the dislocated humerus in the direction of its long axis; this will be sufficient to complete the reduction. In subcoracoid or subglenoid dislocations the operator places his hand upon the patient's shoulder, the base of the ring finger resting upon the acromion process, the ball of the finger placed below the clavicle. The thumb is placed beneath the spine of the scapula as far to the inner end of the spine as possible. Pressure is then made with the balls of the fingers, holding the acromion process in place. The elbow is extended while steady pressure is exerted downward, inward and backward with considerable force.

The following advantages are claimed for the method :—

- (1) There is little risk of further damage, since a short lever is used instead of a long one.
- (2) In cases in which fractures of the humerus, or the bones of the forearm are present, the surgeon is enabled to effect reduction in a manner which does not necessitate the handling of the limb.
- (3) The patient does not suffer any great amount of pain during the procedure.
- (4) The patient is apt to be docile, since he does not expect reduction to be effected from the rear, and without manipulation of the arm.

THE IMPORTANCE OF EARLY REMOVAL OF DOUBTFUL TUMORS OF THE BREAST.

In a recent number of the *British Medical Journal*, J. C. Renton advises that in every patient over thirty years of age where a hard swelling appears in the breast, the sooner the tumor, together with the breast and glands, is removed the better for the patient.

It is a very serious matter when a hard swelling in the breast has been discovered, to recommend delay in intervention while its progress is being observed. In the majority of cases it is better to advise operation at once.

Early and radical operation in such cases is the best treatment, and if more generally done would reduce the mortality from cancer of the breast.

GYNAECOLOGY

Under the charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

INTRA-UTERINE EXPLORATION FOR DIAGNOSTIC PURPOSES

In the July number of the *Post Graduate*, Dr. Abram Brothers, of New York, writes an exhaustive paper on the above subject. He says as recently as ten years ago a gynecological examination could hardly be called complete without the routine resort to the vaginal speculum and uterine sound; while now many gynecologists have practically discarded the use of the sound, unless in exceptional cases. He quotes Keating and Coe as saying: "With increasing skill in diagnosis the necessity for the employment of the probe or sound grows less, until the more experienced gynecologist will restrict its use almost entirely to determining the calibre of the canal, and in obscure cases, its depth. Not so, however, with the beginner. With him it is a valuable aid to diagnosis, and provided it is used antiseptically, there is very little danger from its use."

The doctor says we can accept the contra-indications to the use of the sound as laid down by Hart & Barber and quotes from them the following four points:—

1. The sound is not to be passed during the ordinary menstrual period.
2. It is not to be passed in an acute inflammatory attack of uterus, ovaries, pelvic peritoneum, or connective tissue.
3. It is not to be passed in cases of cancer of the cervix or body of the uterus.
4. It is not to be passed if the patient has missed a menstrual period.

The dangers connected with passing the sound into the uterus are 1. interrupting a possible pregnancy, 2. exciting an intra-uterine inflammation or pelveo-peritonitis, 3. introducing sepsis into the uterine interior with resultant suppurative processes in the Fallopian tubes, and 4. perforation of the uterine wall.

Dr. Brothers gives the following indications for the use of the sound:

1. Patency of internal os and external os.
2. Patency of uterine interior.
3. Relation of uterus to a tumor.
4. Presence of an intra-uterine polyp or submucous fibroid.
5. Determination of the size of an undeveloped or hyperinvolved uterus.

Constriction at the internal os offers, in the doctor's experience, one of the most frequent causes of dysmenorrhoea and sterility, and can only

is positively established by resort to the uterine sound. In a few instances he has known sterility to be cured as a result of the examination.

In speaking of the curette, the doctor says twenty years ago it was seldom used that only experts were supposed to handle it. To-day, the general practitioner's armamentarium is not complete without it.

The chief danger of the curette, he says, is perforation; he has collected 66 cases of this accident, of which 17 died. Another danger is pelveo-peritonitis which has rendered some patients invalids for life. A third condition is after a too thorough curettage the raw surfaces have become agglutinated with complete obstruction of the uterine cavity.

The contra-indications to curettage, he says, are mainly two: the various forms of pelvic inflammation and ectopic gestation. No matter how urgent the indication to explore the uterine cavity may be, only harm in result when this is attempted in the presence of pelveo-peritonitis, parametric abscess, pyosalpinx, ovarian abscess, or extra-uterine pregnancy.

Continuing, the doctor says the curette is, at times, an almost indispensable aid in intra-uterine exploration. It gives us most precise information concerning the structure of the uterine interior. Much valuable information may be gained by having the scrapings microscopically examined. If accidental perforation occurs suspend the operation immediately, do not irrigate, and pack the uterine cavity with gauze. Examination of the uterine interior with the finger is, in the doctor's opinion, a very valuable method of intra-uterine exploration, but there are cases where there is not room for the end of the finger.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty, McGill University, Montreal.

CELLULAR CHANGES IN THE BLOOD IN PUERPERAL INFECTION.

Potocki and Lacasse, "Des modifications cellulaires du Sang dans l'infection Puerperale," in *Annales de Gyn et d'Obstet.*, June 1904, state that this work was undertaken to verify the conclusions of Manchotte and Carton, that with certain reserves, the condition of the cellular elements of the blood in puerperal infections was of prognostic and diagnostic value.

With this object in view, an examination of the blood was made in eight cases of puerperal infection at certain intervals. While the cases were few in number, they seem to have been carefully studied, and will

details of the conditions present, of the treatment adopted, and of the blood examinations are given.

The results obtained are certainly suggestive and, if further work on the part of others along the same lines, leads to similar conclusions, a valuable aid to diagnosis and treatment is at hand.

The changes of value from a prognostic standpoint are in the number of the leucocytes, polynuclears and eosinophiles. They conclude that if the leucocytes reach or pass 25 to 30 thousand, and the polynuclears 80-90 per cent., prognosis should be reserved, especially if this augmentation is accompanied by a rapid reduction or complete disappearance of the eosinophiles.

From the point of view of indication for treatment, the examination of the blood gives less satisfactory results. Thus, if the leucocytes and polynuclears are moderately increased and the eosinophiles are present in the proportion of about 1 per cent., then curettage and simple uterine injections, with appropriate constitutional treatment, is all that is indicated. In grave or desperate cases, where a marked increase in the number of leucocytes and polynuclears is present, with a complete absence of eosinophiles coeliotomy, followed or not by hysterectomy, is perhaps the last therapeutic resort.

The authors conclude that in these grave cases examination of the blood showing the absence of the eosinophiles, will permit the undertaking of radical operative procedures at a sufficiently early date to improve the results, hitherto unsatisfactory, which have followed such surgical intervention.

THE BLOOD IN PREGNANCY.

In the *Johns Hopkins' Hospital Bulletin*, June, 1904, Dr. Thompson reports the result of observations made on twelve cases during a period of seven months, examination of the blood being made once a month as follows: (1) enumeration of the red blood corpuscles, (2) estimation of the hemoglobin percentage, (3) count of the leucocytes, (4) differentiation of the leucocytes, and (5) determination of the specific gravity; a series in all of thirty-three separate blood examinations. The conclusions arrived at are as follows:—

1. A moderate decrease is observed in red blood corpuscles rather early in pregnancy, remaining subnormal throughout the middle months, to rise again to normal at the termination of pregnancy in most cases.
2. A low percentage of hemoglobin constant throughout the first seven months, rapidly approaching normal as pregnancy draws to a close.
3. A slight absolute leucocytosis exists in every case of preg-

nancy, but this slight leucocytosis does not support the theory that it is due to any positive chemiotaxis. 4. There is no variation from normal in the different forms of white corpuscles. 5. The specific gravity is high at the onset of pregnancy, diminishing by progressive steps, to reach its lowest level in the middle months, rising to normal at term.

A YEAR'S EXPERIENCE WITH CONVULSIONS OF CHILDREN.

D. S. Hanson, M.D., in the *Cleveland Medical Journal*, September, 1904, discusses this topic. The paper is a study of nineteen attacks of convulsions, occurring in fourteen children, whose ages varied from eight months to eight years. In six cases the cause was pulmonary irritation; in six, intestinal irritation; one, cutaneous irritation; one, meningitis; and the remainder, the toxins of acute febrile conditions, or undetermined causes.

With regard to treatment, the author considers chloroform the best means of controlling the convulsions. This should be supplemented by chloral enemata, the initial dose for a child of six months being four grains; one year, six grains; two years, eight grains; dissolved in one ounce of warm milk, and injected high into the bowel. The dose may be repeated in half an hour, if necessary.

In severe cases morphine may be given hypodermically in the following doses: at six months, 1-48 grain; at one year, 1-24 grain; at two years, 1-16 grain; and repeated in half an hour if required.

When asphyxia is marked, oxygen inhalation should be resorted to.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

MASTOID DISEASE AND THE GENERAL PRACTITIONER.

Dr. H. Jurgens in the *Medical Fortnightly*, September, 10th, 1904, discusses mastoid disease from the general practitioners point of view. The otologist, he says, is not worried about these cases but the general practitioner, especially the country doctor, finds them a great source of trouble. In 1899, he was called to meet a brother practitioner in consultation. On the way out, the doctor told him that he had a bad case of earache. The patient, aged 19, had been troubled with running ear and severe pain in the head for about two weeks and was then in a semi-comatose state. He was met on the road by a messenger stating that

the boy had just died. A post mortem was refused. In 1903, he had a case in his own practice. A lady had a severe attack of grippe and, after recovering from this, she developed otitis media. The drum membrane was incised and she obtained prompt relief. In the course of a few days the mastoid became very much swollen and tender. Operation was advised but was declined. The temperature ranged from 102 to 103, pulse small and rapid, running from 120 to 160. She went almost crazy with pain. He expected her to become comatose and die; but, on the contrary, the pain and swelling gradually subsided and she made a perfect recovery. In March, 1904, the doctor was called to see a case in a neighboring village who had had a severe earache for several days. The drum membrane had ruptured and there was a considerable discharge of pus, the post-auricular region being much swollen and very tender to the touch. The boy was pale, dull and stupid, pulse rapid and weak, temperature 103. Operation was advised and refused. Hot applications were commenced and seemed to give some relief, but the patient continued to grow worse until finally consent was given to operation. Pus was encountered, the antrum cleared of granulations, the patient making a rapid and perfect recovery. Here are three cases, one of which died without operation, one recovered without operation and the third recovered as the result of operation. Although it is hardly possible to adopt any rule from the experience of three cases yet some general conclusions may be reached.

The question will come up from time to time, does this case require operation or not? In cases of well developed mastoiditis there should be no difficulty in making up one's mind. But what should we do for those protracted middle ear cases which have been discharging pus for a week or two when the pain returns, accompanied by a rise of temperature? Many doctors are apt to postpone operative measures hoping that nature will help us out of the dilemma.

Brother practitioners, says Dr. Jurgens, if you wish to understand the extreme danger of this disease take a skull and look at it. Observe the extreme thinness of the tegmen tympani. It is like tissue paper and the least pressure will rupture it. Look at the large number of communications existing between the tympanic cavity and the two cranial fossae; note the close proximity of the fossa sigmoidea, containing the lateral sinus. The smallest amount of fluid is like dynamite in this cavity. One drop of thick pus will completely block the opening. Only the superior mastoid cell is of any size and the pus must find an exit somewhere. It may break through into the digastric fossa and then burrow down into the neck. By the arrangement of the deep cervical fascia it is liable to find its way into the anterior mediastinum along the anterior prolongation of this fascia. Is that the worst to be expected,

THE CANADA LANCET.

Now the meaning of jugular or lateral sinus thromboidal abscess, of cerebellar abscess. Anyway the tympanic cavity is filled with pus, above, below, behind, source of extreme danger. Can you tell where anyone tell?

The doctor next takes into consideration the anatomical position of the extreme danger of all such cases. After cases and muddling through them somehow, I conclude:—

Otitis should be treated on the expectant plan.

In chronic cases must be treated systematically. The case must be turned over to the otologist. It is a matter of life or death, but of restoration of function. The

doctor is expected to replace the specialist. If, however, mastoid infection takes place, one can ride them over with simple measures. It is not necessary for the practitioner to do the Stacke-Schwartz operation, but he can establish a drainage. Make your incision and use the chisel, hammer and forwards, looking out all the time for the aqueductus Fallopii, containing the facial nerve.

On the plan the doctor will retain the respect of his patient's welfare, will obviate unnecessary worry and, avoid unexpected deaths.

INFLAMMATION OF THE MASTOID PROCESS AND ITS TERMINATION.

As stated in the *American Practitioner and News*, Sept., 1905: Whenever an acute inflammation of the mastoid subsides in a few days, not usually exceeding eight, without formation of pus. When pus is once formed we are assured it will sooner or later find its way out of the mastoid and into the cranial cavity or into the surrounding soft tissue. It is that an abscess of the mastoid may heal spontaneously without evacuation of the pus. It is difficult to determine how long it will last. Another exceptional termination is by the spontaneous absorption of pus through the middle ear and auditory canal. The termination is in cario-necrosis of the osseous lamellae and the replacement of the cells with the formation of granulation tissue.

These changes usually take place after the abscess has been present some time; occasionally, however, as early as the tenth day after the beginning of the trouble. Even after the

necrotic process has brought about such changes spontaneous cure without perforation of the osseous cortex has taken place.

In such cases there is a tendency for the granulations to ossify.

In nearly every case in which the mastoid process contains pus and granulations, if not operated upon, perforation of the external cortical layer will eventually take place, forming a fistulous opening. This is the most common termination of neglected cases of mastoid suppuration. Spontaneous perforation takes place most frequently through the external surface of the bone. It may occur at a point corresponding to the position of the antrum, but more frequently it occurs lower down. Occasionally it breaks high up, as in one of the cases which I will include in this report. When the pus leaves the bone a swelling usually develops over the point of perforation in which fluctuation can usually be detected early. Unoperated cases of this kind finally break through the skin, either at a point corresponding to the opening in the bone or at some distance away from it. The latter will also be illustrated in one of the cases to be reported. The abscess may also break through the inner plate of the mastoid tip into the digastric fossa. These so-called cases of Bezold mastoiditis are uncommon. They usually cause an induration at the insertion of the sterno-cleido-mastoid muscle, and in neglected cases pus burrows and is found in the sheath of the muscles and sometimes in the sheaths of the large vessels of the neck. Pneumatic mastoids, with several large cells, are especially prone to perforate into the digastric fossa.

Mastoid abscess may also perforate the posterior superior wall of the auditory canal, causing first a sagging of that wall (a symptom characteristic of suppuration in the attic), and finally break and discharge pus through the ear canal.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

A CASE OF CARCINOMA OF THE NOSE.

Sir Felix Semon, *Journal of Laryngology*, showed a specimen to the London Laryngological Society, of a case of papilliferous columnar-celled carcinoma of the nose in a young man, aged twenty-four. Attention was first drawn to the case about ten months previously, owing to a profuse attack of epistaxis, followed by a watery discharge which steadily got worse and rapidly became offensive. A cauliflower-like growth was

found to occupy the whole region of the middle meatus of the left side. This was removed, without hemorrhage, by a snare. A pathologist reported a tendency toward malignancy, but would not call the disease cancerous. A month later, all the growth was removed intra-nasally. It was found to be springing from the septum, high up underneath the cribriform plate. Recurrence took place in two months and a definite report of malignancy was made. Sir Victor Horsley was asked to do a radical operation. He first ligated the external carotid, then after plugging the naso-pharyngeal cavity, did a Rouge's operation, removing the greater part of the bony septum, the left middle turbinal, and the ethmoid on the left side, up to the cribriform plate. The operation lasted nearly two hours ; but, so far as could be judged, succeeded in completely removing the growth with a healthy area around it. The case was put on record (1) on account of the general rarity of malignant disease of the nose ; (2) because this particular form was very rarely, indeed, found in the nose ; and (3) on account of the uncommonly young age of the patient.

ADENOIDS AND ENLARGED TONSILS.

Joseph White, in the *Virginia Medical Semi-Monthly*, August 26, writes very clearly on this subject. He draws attention to the relationship existing between certain conditions of the system, which, being about sluggish circulation, and the tendency to engorgement and infiltration of the normal lymph tissue in the naso-pharyngeal space, which by frequent repetition may produce chronic hypertrophy. He believes there is an element of hereditary in these cases, and in cases of enlarged faucial tonsils he speaks of such children as having usually an inheritance of

NASAL SYPHILIS.

Kyle uses the following as a cleansing application in ulcers within the nose due to nasal syphilis, or in fact any ulcerative condition :

R. Potassii Permanganatis, gr. II (.12).

Acidi boraci, gr. V (.3).

Aquae (tepid) ℥ I. (30).

R. Extracti Hydrastis, (aqueous, colorless) ℥ II (7. 5).

Hydrogen Peroxidi.

Aq. Cinnamomi, a.a. ℥ I. (30).

PROVINCE OF QUEBEC NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Windsor Mills.

The Montreal Medico-Chirurgical Society opened the season's work with a "smoker". A large number of the profession assembled to hear the outline of the work which has been planned for the session and to hear the words of the retiring president. A most successful year was reported, and the finances are known to be in a flourishing condition so that the prospects for the future are particularly bright.

Dr. Courmont, of Lyons, France, who has been attending the international convention at St. Louis passed a week in Montreal upon his way home. While in the city he gave a demonstration in the bacteriological laboratories of McGill and Laval upon his agglutination test for tubercle bacilli. The well known original work by Aryling, of Lyons, has been elaborated by Dr. Courmont, who has discovered a peptone medium upon which the tubercle bacilli will grow in such a way as to make a test similar to the Widal reaction in typhoid fever. Dr. Courmont believes that the test is of the greatest value in the early diagnosis of tuberculosis, the agglutination occurring before the bacilli can be detected in the sputum.

Dr. H. G. Nicholls is the only one in Montreal who has done any work in this direction and in several published papers his results have been seen to correspond closely to those obtained by the French observers. He has also pointed out that although of great use in the early cases yet when the physical signs are well established it is not present, and further that cows and sheep give the reaction when no tuberculosis can be made out post mortem. Dr. Courmont who was the guest of Dr. Nicholls was entertained at luncheon by the St. Louis Club and left Montreal for Boston and New York, where he intends to visit the laboratories of the various medical schools.

Mr. Dore, sanitary engineer, of Montreal, has completed a report in regard to a desired reform of overcrowding in congested dwellings. He urges that in future not more than seventy-five per cent of the land should be occupied by buildings, in other words that every house shall have twenty-five per cent. of spare land around it. He also states that houses and stables should have better ventilation and that the Board of Health have power to limit the number of persons dwelling in one building. The present by-law does not give the sanitary engineer power to remedy this state of affairs.

In the death of Dr. P. P. Boulanger, Montreal loses another editor of *La Revue Medicale du Canada*. Dr. Boulanger, who was but thirty-five years old, graduated from Laval in 1892 and practised for six years in Levis later moving to Montreal. Two years ago he gave himself over entirely to the publication of the journal which he founded and became managing editor. A little over six months ago Dr. Brennan, who was associated with Dr. Boulanger in the editing of this weekly, succumbed to pneumonia and Dr. William Derome is now the only one of the original editors left on the staff.

Sir Felix Semon, the English throat specialist, has recently been the guest of Dr. H. S. Birkett, of Montreal, and although visiting Canada on a hunting tour was much interested in examining the laryngoscopic department of the Royal Victoria Hospital, as well as the new operating theatres which are nearing completion.

At a special meeting of the Governors of the Sherbrooke Protestant Hospital the proposed plan of sun-parlors was considered. The plans were submitted and found satisfactory. The two balconies will be situated on the south side of the hospital, communicating with the public wards by wide doors so that patients unable to walk may be readily wheeled or carried out. They will be enclosed in glass, the lower part of which will be arranged to slide up when desired, thus throwing open the parlors to the air as well as the sun.

Major Wood, the President of the Hospital, then informed the Governors that he would take the responsibility of finding funds for building the parlors.

There was a large attendance of medical men, of the province at the elections of the College of Physicians and Surgeons at Laval University, Quebec.

The elections resulted as follows: Pres. Dr. E. P. Lachapelle, Montreal; First Vice Pres., Dr. D. Brochu, Quebec; Second Vice President, Dr. O'Connor, Montreal; Registrar, Dr. H. R. Marsolais, Montreal; Treasurer, Dr. A. Jobin, Quebec; Secretary, Dr. P. O. Faucher.

The Board instructed the Executive Committee to ascertain if it was possible to have a central board of examiners established for the examination of all candidates for license. It also authorized the Committee to apply to the legislature to have the law modified so that the medical curriculum should extend over a period of five years instead of four. The Secretary was then requested to communicate with the General Secretary of the College of Physicians and Surgeons of England, to find out what had been done in the matter of reciprocity of licenses.

The following is a complete list of the governors returned by election:—Universities—Laval, Quebec; Drs. J. M. Ahern, L. Catellier; Laval, Montreal: Drs. E. P. Lachapelle, L. D. Mignault; McGill: Drs. R. Craik, H. A. Lafleur; Bishop's: Dr. F. W. Campbell, J. B. McConnell.

Governors elected by the profession:—District of Montreal—Division No. 1: Drs. A. R. L. Marsolais, J. U. Berard, Montreal; Division No. 2: Drs. R. Boulet, H. J. Chartier, Montreal; Division No. 3: Drs. J. A. MacDonald, G. A. Brown, Montreal; Division No. 4: Dr. A. Laurendeau, St.-Gabriel de Brandon; Division No. 5: Dr. J. A. Pominville, St. Vincent de Paul; Division No. 6: Dr. E. S. Quirk, Aylmer; Division No. 7: Dr. C. O. Ostingy, Valleyfield; Division No. 8: Dr. L. A. Lessard, Granby; Division No. 9: Hon. Dr. Jean Girouard, Longueuil; Division No. 10: Dr. F. H. Daignault, Actonvale; Division No. 11: Dr. I. Sylvestre, Sorel; Division No. 12: Dr. J. A. Ropleau, Montreal; Division No. 13: Dr. J. U. Lalonde, Ste. Cunégonde.

District of Quebec—Division No. 1: Drs. A. Simard, D. Brochu, P. V. Potvin, Quebec; Division No. 2: Drs. M. Fiset, A. Lamothe, A. Tobin, Quebec; Division No. 3: Dr. J. E. Ladrière, Lévis; Division No. 4: Dr. M. Brophy, Ste-Foye; Division No. 5: Dr. A. Riverin, Chicoutimi; Division No. 6: Dr. J. L. M. Genest, St. Bernard; Division No. 7: Dr. L. M. Moreau, L'Islet; Division No. 8: Dr. F. J. Langlois, Trois-Pistoles; Division No. 9: Hon. D. J. B. Fiset, Rimouski.

District of Three Rivers—Division No. 1: Dr. L. J. O. Sirois, St Ferdinand d'Halifax; Division No. 2: Dr. L. P. Normand, Trois-Rivieres; Division No. 3: Dr. D. A. Pante, Louiseville.

District of St.-Francois—Division No. 1: Drs. L. O. Camirand, Ls. C. Banchard, Sherbrooke; Division No. 2: Dr. A. Thibault, St.-Camille de Watton.

Miss Marie Laporte, only daughter of Mayor Laporte, and Dr. D. E. Le Cavalier, both of Montreal, were married in the private chapel of St. James Cathedral.

Dr. Jos. Dobbin, of Quebec, who has been visiting the principal cities of the United States, returned home recently after an absence of two months. Dr. Dobbin took occasion to visit the leading hospitals in the various cities he visited, and speaks in flattering terms of the progress being made in medical science, but although many of these institutions are necessarily larger, our modern Canadian hospitals compare favorably with them.

UNIVERSITIES AND COLLEGES

MEDICAL FACULTY UNIVERSITY OF TORONTO.

The Session was officially opened on the evening of the 3rd October, when Dr. J. A. Temple delivered the annual opening address. There was a large attendance of students present to greet the remarks of Professor Temple. The enthusiasm of the students was quite marked, and the good points in the address were thoroughly appreciated. Surrounding the lecturer were many of the professors and members of the senate. It was quite evident from the close attention given the lecturer that his words were not falling upon dull ears. It is saying less than could be truthfully said when it is stated that Dr. Temple gave the students excellent advice.

Dr. Reeve, the dean of the Medical Faculty, made the statement that the number of first year students this session exceeded that of any previous one.

Much enthusiasm was manifested over the announcement of Mr. Cawthra Mulock's splendid donation of \$100,000 to the clinical facilities of the Medical Faculty. It would appear that the most of this sum will be expended in equipping an out-door department in a thoroughly up-to-date manner.

It was also announced that Mr. P. C. Larkin had very generously given a sufficient sum of money to endow the Reeve Scholarship. This scholarship has been given for a number of years, but there was a possibility that it might have to be discontinued. Mr. Larkin's generous gift puts any such unfortunate termination of the scholarship out of the question.

Mr. Cawthra Mulock and Mr. Larkin deserve the thanks of all those who are interested in the welfare of the Medical Faculty of the University of Toronto. They have also set a good example to others who have enough of this world's wealth to meet their own needs and some to spare for educational and charitable objects.

There were 608 students registered at a recent date as follows: First year, 163; second year, 152; third year, 120; fourth year, 163; fifth year, 10.

There is an active movement on foot to establish a fellowship by contributions from graduates.

QUEEN'S MEDICAL FACULTY, KINGSTON.

The academic year of the Medical Department of Queen's University, Kingston, opened September 28th, with a large attendance of students.

There was no formal opening lecture. In fact, this ante-natal appendix has been abandoned for the most part at Queen's. Instead, a course of lectures, on the history of medicine will be given by different members of the staff, at regular intervals during the session.

These lectures are open to all students of the University.

Dean Connell gave the first lecture of the course on Friday evening, October 14th. After showing the necessity for such a course and setting forth some of the advantages to the physician of a better knowledge of the history of medicine, Dr. Connell dealt with the period of Aesculapius. The lecture was illustrated with many lantern slides, projected on a screen, of statues of Aesculapius representing the conception of the various Greek masters. Perhaps the best series of views were those of the temple of Epidauros, showing the imposing ruin of a shrine where thousands upon thousands had knelt before the spirit of Aesculapius.

The combined course, covering a period of six years, and leading up to the degrees of B. A. and M. D. is annually growing in favor with the students.

Last year there were 37 graduates in Arts enrolled in medicine and about the same number of undergraduates or students taking the combined course out of a total of 216 on the register.

It will be some days yet before the total registration for the session can be made known, but it is expected the attendance will be in the neighborhood of 225.

McGILL MEDICAL FACULTY, MONTREAL.

The opening lecture of the McGill Medical Faculty was delivered by Prof. A. C. Abbott, of the University of Pennsylvania. The custom of having such an address has become a fixed one at McGill and many notable names have been associated with it in times past.

The subject was in general an appeal to the student body to follow out their training on as broad lines as possible. The lecturer pointed out that the modern tendency in all big enterprises was specialization, and that in medicine, as in other pursuits, it was the order of the day; but that it was killing to the individual if begun too early in his career, before he had acquired a firm broad foundation. If one wished to be a thoroughly educated physician whose councils would carry weight in professional deliberations, it was necessary to leave specialism to a later period of life. To a student entering upon a medical curriculum it seemed absurd that such a vast field must be covered, in the "good old times" two courses of lectures of four or five months sufficed. Why the necessity of such a change? Was it not that the gradual change of medicine from a state more or less of empiricism to a broad biological problem had forced into recognition the various branches of science and art to which the advance

was due. Again if one were to take the branches taught twenty years ago, such as Chemistry, Physiology, and Pathology, and compare the actual work done then and now the differences if tabulated would be startling. Take for instance Chemistry; as taught in medical schools of today, it is a practical science bearing upon the clinical work, and required daily in routine practise, general chemistry being a subject required for entrance at the matriculation examination. Bacteriology itself opened up a vast field for increase of time and labour, not to speak of Pathology with its unending variations in gross and microscopic anatomy. Preventive medicine was another subject which should in every curriculum absorb a fair share of time, this was the medicine of the future and great developments must result from the time devoted to this branch. Leading off from this point the lecturer showed how so many of the triumphs of preventive medicine originated directly or indirectly in the laboratory, and demonstrated that it was impossible for a medical school to get on without facilities of this description, and further that money in large quantities was an absolute necessity for equipping and maintaining them. Further facilities were in many cases required for extension in the field of preventive medicine, more especially for the training of men to take up the work of practical sanitation in a public capacity. Lastly the professor dwelt upon the responsibilities which the senior student would soon find thrust upon him,—the duties demanded by the central and local governments in regard to the registration of transmissible diseases, births and deaths. Carelessness in these matters was a definite neglect of duty and the doctor should remember that he should be a good citizen as well as a good medical practitioner.

Dean Roddick at the close of the lecture announced that Lord Strathcona had presented the medical faculty with another gift of fifty thousand dollars; an excellent demonstration upon the subject before them.

The University lecture by Principal Peterson was also of especial interest to the medical faculty, in that he dwelt upon the particular needs of this department and told of some of the uses to which donations might be applied.

The students societies are now in full swing and at the opening meeting of the McGill Medical Society the lecture was delivered by Dr. J. G. Adami. The subject chosen was Life, and the lecturer in his own inimitable style and graceful English explained the meaning of life and the shades of difference between organic and inorganic matter, illustrating by means of the vital processes as compared with the chemical activities between the carbon compounds.

The presidential address was delivered by Mr. A. Cumming, Med. '05.

In the McGill Medical Faculty there are some 375 students who have already registered, and of these about 100 are freshmen.

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EDITORIAL

THE TREATMENT OF INEBRIATES.

A short time ago there was held a very influential and representative meeting in the Lieutenant-Governor's residence, Toronto, to consider the important question of the treatment of the inebriate. Hon. G. W. Ross presided. Among those who were present may be mentioned Lieut.-Governor Clark and Mr. Clark, Dr. T. D. Crothers, of Hartford, Conn., Dr. A. M. Roseburgh, Secretary of the Association.

A number of resolutions were passed organizing the meeting into an association to study the best methods of dealing with inebriates. The general trend of opinion was that inebriety is a disease and should be treated along rational lines. It was held that the custom of committing drunkards to jail, as a means of correcting the evil of intemperance, was a complete failure.

Dr. A. M. Roseburgh gave a very full and lucid account of what is being done for inebriates in some parts of Britain and the United States. It is well known that Dr. Roseburgh has given this subject much thought, and, consequently, what he has to say carries much weight.

Dr. Crothers, of Hartford, Conn., gave a very able address upon the treatment of the inebriate. He took very strong ground that inebriety is a disease, and that success can only come by treating it as such. He discussed very fully and successfully too the objection to restraining inebriates because it was interfering with personal liberty. All the best authorities are now agreed that the true inebriate is the victim of disease, regardless of the fact that he may be responsible for his morbid condition through bad habits.

In the midst of the more scientific discussion of any question, it is sometimes well to listen to what people think. The following quotation is taken from the *Pioneer* and is from the pen of a well-known and well-informed working man :

"If this habit, or mania, is a disease, as these great men say it is, then I defy all the doctors and all the statesmen in Christendom to tell us of one other disease the cause of which is so clearly indicated as that

of drunkenness. I do think it was a most ridiculous farce for these men to spend their valuable time discussing how they could tinker up the poor drunkard, and not say one word in favor of the removal of the cause of all his woe."

Whatever steps may be taken in this matter, we commend the whole question to our readers. The medical profession has ever been in the advance line in all movements for the betterment of the human race. When the best method of treating the inebriate will have been worked out, it be found that the major share of the credit will belong to the medical men of the country.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

The report of the meeting of the Council of the College of Physicians and Surgeons of Ontario held last June has been issued. In looking over the report one is pleased to note the tendency to raise the standard of medical education in Ontario. The Council very wisely adhered to the five years' course of study.

On page 57 there will be found a list of patent medicines which contain large percentages of alcohol. The percentages run all the way from 13 to 47, several of the most popular of the list averaging about 30. We have said on former occasions that this should be stopped, and that all proprietary should have the formulae printed on the wrappers. Further, they should not be allowed the freedom of the market if they contain any ingredient that is now on the prohibited drug list. This is a fit and proper subject for legislation, and the Council adopted such a resolution, asking that the Dominion Government be asked to pass such an Act.

It is a matter for congratulation that the Council has courage to take action against those who do discredit to the profession of medicine. The receipts from fines amounted to \$1,150, while the disbursements were \$1,046. The cases of Dr. J. E. Hett, of Berlin, and Dr. A. Crichton, of Castleton, were referred to the Discipline Committee. There were in all 59 prosecutions and of these 38 were successful to some extent, either by way of fine, warrants out for the offender, or that they have left the country. With regard to Osteopaths, Christian Science healers, Miasmatic healers, etc., the prosecutor states that he was unable to do anything because they prescribe no medicines, and thinks the law should be amended so as to enable these classes of healers to be proceeded against. These classes of healers are growing more numerous and bold every year, and it is high time that the medical profession took a bold stand to secure such legislation as will enable the Council to successfully purge the province of such impostors.

Mr. J. L. McDowell was suspended for three years and Mr. Thomas Gray for two years for wrongful acts in connection with their examinations.

The Council acted wisely in maintaining a fairly high standard for matriculation. A number of examinations are accepted but all of them are such as to reflect credit upon this part of the student's education.

There was a good deal of discussion on the advisability of selling the building on Bay Street. On motion of Dr. King it was agreed to offer the property for sale. In this we concur. Neither the building nor the location is suited to the requirements of the Medical Council.

Dr. Moorehouse gave notice of a by-law to hold examinations in London. This ought to meet with the approval of the Council at a future meeting. London has a medical college and is in the same position as Kingston, where examinations are held.

It is gratifying to note that, after paying off \$7,500 on the mortgage, there was a balance of \$5,128 in the treasury. The annual fee remains the same, namely \$2.

It was agreed to pay each member of the Council \$15 per day while absent from home, and a mileage of 5 cents. The salary of the Registrar was fixed at \$2,500, and the Treasurer at \$600.

Fifth year students may put in the year in a recognized hospital, or six months with a medical practitioner and six months in a hospital.

The following scale of fees was suggested by the Committee: Advice in office, \$1 to \$10; certificate of lunacy, not less than, \$5; any written opinion, \$2 to \$10; vaccination, single, \$1 to \$2; death certificate, for Life Insurance Co., \$5 to \$10; single visit, 8 a. m. to 8 p. m., \$1 to \$5; night visit, 8 p. m. to 8 a. m., \$2 to \$10; detention at patient's house, per hour, \$1 to \$5; fee for consulting physician, \$5 to \$25; mileage out of town, 50 cents to \$2; normal labor, \$6 to \$25; subsequent visits at usual rate; detention at patient's house, beyond 3 hours, \$1 to \$2; instrumental or complicated labor, double normal; a general anaesthetic, \$5 to \$25; major operations, \$50 to \$500; minor do., \$5 to \$50; simple fracture, \$5 to \$50; compound do., \$10 to \$100.

THE GROWTH OF QUACKERY.

Constantly there is being brought under the notice of the medical profession the virtues of some method of treatment, flaunted before the public gaze by some enterprising electrician, masseur, bather, x-rayist, and so on. In many instances, the persons, starting various institutions for the carrying out of the above methods, have the affrontery to appeal to the members of the medical profession to send in their patients with the view of having these various treatments put in practice.

The medical profession cannot be too guarded in its attitude towards this sort of quackery. These persons and institutions are not working for the good of the medical profession, but solely for their own gain. They are only too willing, however, to make use of the profession to further their own ends, if they can do so. The medical profession should not countenance any person, or institution, not working in direct harmony with it.

Many of these persons, having acquired a smattering of knowledge in the subject, desire to make gain out of this knowledge, and start some scheme for the cure of disease, by the employment of some means that, though possessed of some merit in its proper limits, is worse than useless when pushed beyond these limits. On many of these so-called methods of treatment, the medical profession has been too silent, and has thereby given a sort of countenance to them.

Massage, hot air, baths, sunlight, electricity, exercise, x-rays, drink, and such like are all very well in themselves, and are capable of doing good in the proper hands; but when their application to the treatment of disease falls into the hands of the purely commercial methods of persons and institutions, now referred to, nothing but evil, in the end, can come from them to proper employment of these agencies. Mysticism is the main feature of these systems of treatment. The patient is rubbed, and, at the same time, informed that a special influence is brought to bear on his case, through some power in the person treating him. Some utterly worthless concoction is given him to drink, or drugs, and he is assured it will create within him a new power of resistance. Whatever there is in the treatment is merely one suggestion.

The medical profession must take a firm and a united stand on these matters. If institutions are to exist for the treatment of disease, they must be under the supervision of the medical profession. No proprietary medicine, or plan of treatment, should be allowed, the nature of which is not made known in the fullest manner. Light is most valuable in the detection of infection; and, so here, light will prove valuable in relegating these quack methods to their proper place—oblivion.

DR. H. T. BULSTRODE ON THE CAUSES OF PHTHISIS.

In his third Milroy Lecture, *London Lancet*, August 15, the following significant sentences occur: "If I were told to select three, and three only, the agencies with which I have in some degree dealt in these lectures, those upon which, assuming always a sufficiency of food, I would place

most reliance as regards the control of pulmonary tuberculosis, I should arrange them somewhat in this order—1. The education of older children in principles of health, and the periodical physical examination of all school children with a view to improving the health of those prone to tuberculosis, or who may already be suffering from the disease in an unrecognized though not unrecognizable form. The direct and indirect results which would accrue from this would soon make themselves felt in the direction of an unwillingness on the part of the people to occupy slums or to dwell in places where the sun rarely penetrates. It would also result later on a return to local and perhaps central administrative bodies of representatives who were more alive to the importance of the public health aspect of their duties than is always the case at the present time. 2. Some such system of compulsory insurance against sickness and invalidity as obtains in Germany and which, it is important to note, makes for the provision of sanatoriums, the support of those threatened with illness, and the general well-being of the poorer classes. 3. Better housing and improved conditions of employment of the working-class,—i.e., more light, more air-space, better ventilation, and greater cleanliness in the home, the workshop, and the factory.”

THE TRAINING OF THE SURGEON.

Prof. William Stewart Halstead, in the September number of the *Bulletin* of the Johns Hopkins Hospital, discusses the important subject of the training of the surgeon. As Professor Halstead is one of the world's foremost surgeons, one turns naturally to see what he has to say.

He starts out with the statement that, “pain, haemorrhage and infection, the three great evils which had always embittered the practice of surgery and checked its progress, were, in a moment, in a quarter of a century (1846-1873) robbed of their terrors.” He then goes on to speak of the great progress that has been made since 1873 in the evolution of antiseptic principles in surgery.

Much attention is devoted to the “intimate interdependence of physiology, pathology and surgery.” These have each aided the advance of the other two. Physiology lays the foundation for pathology, and pathology in turn for surgery. Again, surgery has done much for physiology and pathology. Harvey's great work on the circulation of the blood, and the discoveries of Malpighi on the capillaries which completed Harvey's, were the foundation on which surgery was destined to build. These advances enabled surgeons to understand haemorrhage and the proper means of arresting it, and led to the advances and dis-

coveries of Hunter. Without the physiological investigations of Harvey and Malpighi we would not have had the surgical discoveries of Hunter on the healing of wounds, on inflammation, and the ligation of arteries.

Professor Halstead refers to the recognition of the surgeons of England and the granting of the charter by George III., creating the Royal College of Surgeons. The formation of the academy of surgery of Paris, in 1731, was the true origin of Modern Surgery, and a turning point in its history.

The immortal discoveries of Simpson and chloroform, Morton and ether have overcome the pain of surgery; the achievements of Harvey, Malpighi and Hunter have abolished the fear of haemorrhage; and the scientific work of Lister has forever put an end to the dread of infection.

"After all, the hospital, the operating room and the wards should be laboratories, laboratories of the highest order, and we know from experience that where this conception prevails not only is the cause of higher education and of medical science best served, but also the welfare of the patient is best promoted. It remains with the teachers of medicine and surgery to make them so. The surgeon and the physician should be equipped and should be expected to carry on work of research; they hold positions which should make them fertile in suggesting lines of investigation to their assistants and associates; they should not only be productive themselves, but should serve as a constant stimulus to others."

PROVINCIAL BOARD OF HEALTH REPORT.

The twenty-second annual report of the Board of Health has just been issued. It contains a considerable amount of useful information.

There is an interesting article on the evolution of public health as a department of municipal government. Dr. John A. Amyot has an excellent paper on the subject of bacteriology.

Dr. C. A. Hodgetts, the present Secretary to the Board, gives an interesting table on the number of cases of infectious diseases. For the year 1903 there were reported 820 cases of smallpox with 21 deaths; 3,677 cases of scarlet fever and 529 deaths; 3,599 cases of diphtheria and 478 deaths; 53 deaths from measles; 148 from whooping cough; 1,012 reported cases of typhoid and 298 deaths; and 2,072 deaths from tuberculosis.

In the above statistics it will be noticed that measles, whooping cough and tuberculosis are not reported. Consequently nothing can be said as to the mortality in these diseases. In the case of tuberculosis it is safe to assume that there are four for every one that dies. This

would give some eight or ten thousand as the number suffering from this disease in Ontario, or about 5 per 1,000 of the population.

With regard to scarlet fever, diphtheria and typhoid fever, no doubt many cases are not reported, and this vitiates the value of the statistics as a means of determining the true mortality ratio of these diseases. In the case of diphtheria we are of the opinion that the death rate is still too high. On a former occasion we drew attention to this. One would not expect a death rate of 13 per cent., under our present method of treatment by the antitoxine serum. If statistics prove anything at all, they prove that a much lower death rate than this should be expected under the early and vigorous administration of this potent remedy.

Some very useful regulations are laid down for the hygiene management of barber shops.

Upon the whole, the report proves what a valuable agency the people possess in the Provincial Board of Health for the prevention of the spread of contagious diseases.

STICKLES v. Drs. W. F. BRYANS and G. B. SMITH, of Toronto.

On the 22nd of January, 1904, Drs. Bryans and Smith issued certificates to commit to the asylum the plaintiff in this action, a married woman.

She was retained in the asylum for sometime and then allowed her liberty. On regaining her liberty, she entered action against Drs. W. F. Bryans and G. B. Smith, for damages to the extent of \$10,000. Drs. Bryans and Smith very properly resisted the action.

The case came to trial on 6th, 7th, 8th, and 10th, October, before Chancellor, Sir John A. Boyd. After an exhaustive and expensive trial, the jury found a verdict in favor of the defendants on every point submitted by the Court.

The learned Judge reviewed the case at great length and with the utmost fairness. He pointed out the facts the defendants were honorable members of the medical profession, that they could have no motive other than the plaintiff's welfare in committing her to the asylum, that their story had been corroborated by a number of witnesses whose truthfulness could not be questioned, and that they had apparently acted with care in coming to their conclusions.

The following questions were submitted to the jury:—

1. Was the plaintiff of unsound mind on the 22nd January, 1904?
2. Did the defendants honestly believe the plaintiff was then of unsound mind?
3. Did the defendants take reasonable care in informing themselves of the material circumstances connected with the plaintiff's condition?

4 Were the defendants actuated by improper or unprofessional motives in signing the certificates?

To all of these questions the jury gave an answer favorable to the defendants, and a verdict in their behalf.

The costs must be very heavy in this action. It is not at all likely that the defendants will be able to recover their large disbursements from the plaintiff. The husband was no party to the action. Indeed, took the side of the defendants, as did also the plaintiff's mother, daughter and uncle. The statements made by the defendants were borne out by the clear and able testimony of Dr. Milner and Stenhouse.

Drs. Bryans and Smith are to be congratulated upon the result of the trial. It has a wider meaning than that of the defendants themselves, as such actions more or less affect the good and welfare of the entire profession. Every such action lost or comprised in any way encourages others to go to law with their grievances, or to attempt to extort money by blackmail. We feel that the profession should take some steps to recognize the valiant fight made by the defendants not only in their own interests, but in that of the whole medical profession.

A more unjust case than this was probably never launched into court. The evidence brought out the facts that the plaintiff had been addicted to the excessive use of alcohol, and that a verdict had been secured against a certain party for improper relationships with her. But it is usually the experience of the medical profession that suits for malpractice are instigated by the worthless or impecunious.

This is, perhaps, a fitting time to again call attention to the claims of the Canadian Medical Protective Association. So long as this worthy Association has only a membership of a few hundred, it has neither the means nor the influence it would have were its membership up into the thousands. There is no reason why every regular practitioner in Canada should not belong to this Association. If this Association had a membership of several thousands and four or five thousand dollars in the treasury, it would have a deterrent effect on cranks, crooks and designing patients. When litigation did come it would distribute the cost over many, instead of falling so heavily upon one or two. In the present instances perhaps at least \$400 each.

In the meantime, we extend to Drs. Bryans and Smith the congratulations of the entire medical profession.

THE OCTOBER ISSUE.

Our issue for October was unavoidably delayed in its publication for a short time, owing to some changes that were being made in the press-room of the printers.

PERSONAL AND NEWS ITEMS.

Dr. Clarence Starr has removed to 224 Bloor St. West, Toronto.

Dr. Allan Shore has occupied his new offices at 425 Bloor St., West, Toronto.

Dr. Kenneth McKinnon and Miss Tytler, both of Guelph, were married October 12.

Dr. G. F. Emery, of Gananoque, has disposed of his practice there and removed to Ottawa.

Dr. G. Eric Chapman has gone to Sombra, where he will succeed Dr. Cowan, the present practitioner.

Dr. James Barclay, of Montreal, was married a couple of weeks ago to Miss Beaudry of the same place.

Miss Mary Isabel Margaret, of Maxville, was married to Dr. James T. Hope, of Alexandria, on October 12.

Dr. Thomas Douglas, of Hamilton, has purchased the medical practice of the late Dr. Mallory, of Colborne.

Dr. Francis P. McNulty and Miss Louise Sullivan, both of Peterboro', were united in marriage in the latter part of September.

Dr. Lorne Campbell has bought a well established practice at Tavisstock. The deal included the retiring doctor's residence.

Dr. T. C. Cowan, of Sombra, has sold out his practice and will leave for England soon, where he will take a post-graduate course.

Dr. W. W. Wickham, of Charlottetown, died at Ste. Agathe. Dr. Wickham went to Ste. Agathe for the benefit of his health.

Dr. Ernest F. Arnold, of Vankleek Hill, and Miss Davidson, of Toronto, were married a few weeks ago and took in the St. Louis Fair.

Dr. Charles M. MacInnes, Vankleek Hill, was married two weeks ago to Miss Nettie LeRoy, daughter of Mr. Ralph LeRoy, of that town.

Dr. George Elliott, General Secretary of the Canadian Medical Association, has removed from 129 John St., to 203 Beverly St., Toronto.

A. Gale Massey, B. A. Tor., M. D., C. M., Trin., the recently returned from South Africa, has gone to England for post-graduate work.

Dr. H. E. Gage, after a year's successful practice at McDonald's Corners, has left for Kingston. He is succeeded by Dr. W. A. R. Michell.

Dr. Gustin, of St. Thomas, and his esteemed wife, celebrated the fifty-fifth anniversary of their wedding last Monday. A number of friends called to extend congratulations.

The marriage of Dr. F. N. G. Starr and Miss Annie Callender Mackay, of Hillshead, New Glasgow, N. S., took place on Wednesday 18th September.

Dr. C. A. Porteous will succeed Dr. J. V. Anglin as assistant medical superintendent to Dr. Burgess, of the Protestant Hospital for the Insane at Virdun.

Dr. A. W. Michell, son of Public School Inspector Michell, of Ottawa, has taken over the medical practice at McDonald's Corners of Dr. H. E. Gage, formerly of Kingston.

Dr. P. H. Hughes, of Leamington, who spent the summer in Manitoba and Alberta, has returned and will resume practice. His health has greatly improved and he feels well.

Dr. Major H. Langs, of Hamilton, son of the late E. R. Langs, of Langford, was united in marriage to Miss Nellie Rothwell, second daughter of Mr. B. Rothwell, on 12th October.

Sir Lauder and Lady Brunton, of London, Eng., visited Toronto and were the guests of Dr. McPhedran, of 151 Bloor Street. He was on his way to St. Louis to attend the Science Congress.

Dr. S. Kitchen, St. George, and Dr. R. P. Boucher, Peterboro', were appointed to represent the Provincial Board of Health at the Congress on Tuberculosis at St. Louis on 3rd, 4th and 5th of October.

The engagement is announced of Miss Clara Clarke, Avenue Road, Toronto, to Dr. Morley Currie, M. P. P., of Picton. The marriage, which will be quiet, has been arranged for the latter part of November.

Dr. Ward Woolner, who has been practising his profession in Collingwood, associated with Dr. McKay, of that place, has decided to locate in Ayr, and has taken the offices recently vacated by Dr. A. S. Lovett.

The many friends of Dr. Jack Hunt will be pleased to hear that he has been appointed doctor and surgeon on board of the steamship Dominion of the Dominion Line Steamship Company sailing between Montreal and Liverpool, England.

Dr. and Mrs. Wallace Scott were warmly welcomed back to Toronto last week after a sojourn in London, Eng., of upwards of two years. They will remain in Canada. At present they are at Dr. Scott's father's home, No. 576 Church Street.

Dr. Brefney O'Reilly, son of Dr. Charles O'Reilly, of the Toronto General Hospital, has left Toronto for Vancouver, B. C., where he will sail on September 19 as surgeon on Canadian Pacific steamship Tartar for Hong Kong and parts in China and Japan.

Geo. E. DeWitt, M. D., was invited by the New York Medical Association as a representative from Nova Scotia to attend the international congress for the prevention of tuberculosis held in St. Louis early in October. Dr. DeWitt has a private sanitarium in Wolfville.

Dr. Tye, of Chatham, who has practiced in that city for the last 10 years, has disposed of his practice to Drs. J. S. Agar & Agar, formerly of Dover Centre. Dr. Tye will continue active practice until the first of the year, when he leaves for Kansas City, Mo., where he will continue the practice of medicine.

The many friends of Dr. Charles E. Treble will be pleased to learn that he intends returning to Toronto shortly after an absence of nearly three years spent in England and on the continent. Dr. Treble some time ago obtained the double qualification of M. R. C. S., England, L. R. C. P., London, and now holds a position on the staff of the Mount Vernon Hospital for Consumptives, one of the largest hospitals of its kind in England.

Dr. Earnest Wills, of Calgary, lies at his sanitarium in a critical condition as the result of a mysterious accident. He is suffering from severe concussion of the brain. The injured man was found at the foot of a steep hill 300 yards from his home by Thomas Kitt, an employee of his sanitarium. He was lying on his back at the side of the trail. His bicycle was several feet away. Dr. Wills was unconscious when discovered.

Dr. DeWitt, of Wolfville, returning from the International Tuberculosis congress held at the World's Fair, stated that the congress was represented from all parts of the continent. The meetings were characterized with interest and enthusiasm. Fraternal greetings were exchanged between the congress and the congress of engineers. The two bodies have united for the purpose of promoting sanitary legislation and to prevent the spread of tuberculosis.

The elections of the College of Physicians and Surgeons were held at Laval University yesterday afternoon, and there was a large attendance of medical men from different parts of the province. The elections resulted as follows: President, Dr. E. P. Lachapalle, Montreal, re-elected; first vice-president, Dr. D. Brochu, Quebec; second vice-president, Dr. O'Connor, Montreal; representative of the Bishop's College, registrar, Dr. A. R. Marsolais, Montreal; treasurer, Dr. A. Jobin, Quebec, re-elected; secretary, Dr. P. O. Faucher, Quebec.

OBITUARY.

A. E. MALLORY, M. D.

Dr. Mallory died on the 4th October, 1904, at his home at Colborne. He had been Registrar of East Northumberland since 1899. He was born at Cobourg, Ont., February 1, 1849. He was educated at Albert College, Belleville, and McGill University, whence he graduated in medicine in 1872. For some years he practised his profession at Warkworth, Ont. He was licensed by the Royal College of Physicians and Surgeons, Edinburgh, in 1878, and obtained a certificate of British registration the same year. In the general elections of 1887 he was elected to the Legislature for East Northumberland.

T. E. MORRIS, M. D.

Dr. T. E. Morris, of St. John, N. B., died suddenly 9th October, at his home in St. John. The late Dr. Morris was one of the doctors who volunteered to fight the smallpox epidemic in St. John a few years ago, and his services in that respect are vividly remembered yet.

Dr. Morris was a graduate of McGill in 1899 and was very popular in Montreal while there. He has been married but a year.

P. P. BOULANGER, M. D.

Dr. P. P. Boulanger died 29th September at the family residence, 51 St. Denis Street, Montreal, after a short illness. Dr. Boulanger graduated from Laval University, Quebec, in 1892, and practised medicine for six years at Levis, but later moved to Montreal.

Two years ago the late gentleman discontinued his practice and devoted his attention to *La Revue Medicale du Canada*, which publication founded in Quebec some eight years ago. He was assisted in this work the late Dr. Brennan and Dr. William Derome.

He is survived by a wife and two children. Mrs. Carrol, wife of Judge Carrol, of Quebec, is a sister of the deceased.

R. S. CHEFFEY, M. D.

The death occurred on 8th October, of Dr. R. S. Cheffey, who for over half a century was well-known throughout the county of Simcoe. For

many years he was county coroner. Four years ago he retired from practice, and lived in Toronto. Dr. Cheffey is survived by his widow and two married daughters.

ACHILLE CHOUINARD, M. D.

Dr. Achille Chouinard, son of Mr. Chouinard, City Attorney for Quebec, died 11th October, at the residence of his father. Deceased was well known and highly respected by a large circle of friends who deeply regret his loss. He returned from France last spring where he spent two years following a medical course in the best hospitals of the French capital. Soon after his return home Dr. Chouinard was stricken down with consumption.

BOOK REVIEWS.

REGIONAL MINOR SURGERY.

By George Gray Van Schaick, Consulting Surgeon to French Hospital, N. Y. Second edition, enlarged and revised, 228 pages. Bound in cloth. Profusely illustrated. Price, \$1.50. International Journal of Surgery Co., N. Y.

The practicability and usefulness of this book is best indicated by the demand, necessitating a second edition in an unusual short time. This edition has been subjected to a thorough revision and additional chapters have been added.

The author's object, to furnish the general practitioner with such practical information on Minor Surgical Conditions as will be of the greatest service to him in his daily practice, has been well accomplished. Subjects of a technical character have been avoided, and only the most applicable methods demonstrated by twenty years private and hospital experience are presented. The book is liberally illustrated with original sketches and is so eminently practical and useful, we believe it will be run through many more editions.

DR. EMMA E. WALKER'S BEAUTY AND HYGIENE.

Beauty Through Hygiene, Common Sense Ways to Health for Girls. By Emma E. Walker, M.D., Member of the New York Academy of Medicine, etc. Illustrated. New York: A. S. Barnes and Company, 1904. Price, \$1.00.

This excellent little book is written for girls by an experienced writer and well-informed physician. The authoress discusses the important sub-

jects of Deep Breathing, Exercise for Girls Sports, Poise, The Fat Girl, The Thin Girl, Corrective Exercises, Exercises in Housework, Massage, Care of the Skin, Complexion, Perspiration, Constipation, Bathing, and the Care of the Hair. The authoress writes in a clear and interesting style. She has always something good to tell and she tells it in a truly pleasant manner. Doctors would do well to recommend this book to young women and growing girls.

DR. BOARDMAN REED'S DISEASES OF THE STOMACH AND INTESTINES.

Lectures to General Practitioners on the Diseases of the Stomach and Intestines, as well as Allied and Resultant Conditions, with Modern Methods of Diagnosis and Treatment. By Boardman Reed, M.D., Professor of Diseases of the Gastrointestinal Tract, Hygiene and Climatology in the Department of Medicine of Temple College, Philadelphia; Attending Physician to the Samaritan Hospital; Member of the American Medical Association, American Climatological Association, American Electro-Therapeutic Association, Foreign Member of the French Societe d' Electrotherapie, etc. New York: E. B. Treat & Co. Price, cloth, \$5.00; half morocco, \$6.00.

Dr. Boardman Reed needs no introduction to the medical profession as an authority on diseases of the digestive organs: for he has long been a worker in this field, and has studied with such distinguished authorities on diseases of the stomach and intestines as Oser, Boas, Ewald and Kuttner. He has also had a very large clinic of his own to draw material from. The work is a large one of over 1,000 pages, and containing about 150 illustrations. This book covers the entire field of gastrointestinal diseases so thoroughly that nothing appears to have been omitted. It is a complete text and guide for both general practitioner and specialist. Surgical subjects, such as appendicitis, haemorrhoids, the surgical treatment of gastric ulcer, etc., are fully discussed in the volume, thus making it a complete encyclopaedia on the diseases of the stomach and intestines. We highly commend the labors of the author and mechanical work of the publishers. This book absent from the library, there is a great blank; being present, there is a sure and safe consultant ever at the disposal of its possessor.

THE DOCTOR'S LEISURE HOUR.

Facts and Fancies of Interest to the Doctor and his Patient. Charles Wells Moulton, General Editor, and arranged by Porter Davies, M.D., 1904. The Saalfeld Publishing Company, Chicago, Akron, O., and New York. Toronto: Messrs. Chandler and Massey. Price, \$2.50.

This is a very handsome octavo volume of 350 pages, with uncut edges and gilt top. It is bound in beautiful dark brown corded muslin. It is the first volume of the doctor's recreation series. The selections,

prose and poetical, are of a most happy character, and suitable for the medical table. A doctor can easily beguile away an hour upon this book, as it is full of pretty little stories, selections, and pieces of good humor. It has often been said that the doctor should not confine all his reading to medical subjects. The present volume is a first class one to possess for the purpose of one's amusement. Many of the selections would bear repeating. The book is brim full of fun, suited to the doctor's mental view of things. There are some very fine anecdotes about famous doctors. The country doctor, the doctor's horse, the doctor's wife, the quack, etc., etc., all come in for their full share of attention. Of a certain quack we are told: "Wanted—A gentleman to undertake the sale of a patent medicine; the advertiser guarantees it will be profitable to the undertaker."

VON BERGMANN'S SURGERY.

A System of Practical Surgery. By Drs. E. von Bergmann, of Berlin, P. von Bruns, of Tübingen and J. von Mikulicz, of Breslau. Edited by William T. Bull, M.D., Professor of Surgery in the College of Physicians and Surgeons (Columbia University), New York. To be complete in five imperial octavo volumes, containing over 4,000 pages, 1,600 engravings and 110 full-page plates in colors and monochrome. Sold by subscription only. Per volume, *net.* cloth, \$6.00; leather, \$7.00; half morocco \$8.50. Volume IV just ready. 757 pages 345 engravings, 16 plates. Lea Brothers & Co., Publishers. Philadelphia and New York, 1904.

All those who have use for a thorough exposition of the best surgery of two continents can find it in von Bergmann's great work, now rendered available for readers of English by Dr. William T. Bull, of New York. In his editorial preface he well says that it is encyclopædic, and that many of its chapters exceed in scope and detail special treatises which have been published on their subjects. Still more interesting is his statement that the great value of the work lies in its practical and clinical character. This is supported by an abundance of pathological data, details of original research, and statistical facts, rendering the work of inestimable value to the student, the surgeon and the general practitioner. These five volumes in themselves will constitute a complete working library on surgery. The fourth has just appeared. It covers the immensely important subject of the whole alimentary tract, including Hernia. The regional and systemic division of subjects into volumes adopted for this work simplifies and facilitates consultation. The publication of a work of 4,000 pages, with 1,600 engravings and 110 colored plates, in less than a year is characteristic of the methods and demands of this country. Due care has nevertheless been bestowed upon every detail of editing and manufacture, in fact the American

dition is far richer in engravings and plates than its German prototype. The special features wherein American surgery differs from that practised in Europe are fully reflected, so that the work is thoroughly adapted to the requirements of this continent.

BRUBAKER'S PHYSIOLOGY.

A Text-book of Human Physiology, by Albert P. Brubaker, A.M., M.D., Professor of Hygiene in the Drexel Institute of Dental Surgery; Lecturer on Physiology and Physiology and Hygiene in the Jefferson Medical College, Professor of Physiology in the Pennsylvania College of Art, Science and Industry. With colored plate, 354 illustrations. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut Street, 1904. Price, cloth, /4.00, net. Toronto: Messrs. Chandler and Massey.

The author and publishers have given the profession an excellent work on Physiology. One should be able to say a good deal in 700 octavo pages, and Dr. Brubaker has done so, and has done it well. The work covers the whole range of physiology in a thoroughly up-to-date manner. The author has long been known as a writer on physiology, and much would be expected from him in a serious attempt, such as the present volume, to give a systematic review of our present day knowledge of physiology. A careful perusal of this volume convinces one of two things: that the author has a wide knowledge of the literature of the subject; and that he has had much experience of his own in the best form in which to present that knowledge. The work has been prepared very largely from the standpoint of the practising physician, and is calculated to throw light upon the relationships of the normal to the abnormal organ. That physiology and pathology must thus go together is admitted by all. We congratulate Dr. Brubaker upon the results of his labors, and predict that this work on physiology will soon take its place with the standard works and books upon this subject. The appearance of the book, in every respect, reflects credit upon the publishers.

DISEASES OF THE STOMACH.

Diseases of the Stomach and Their Surgical Treatment by A. W. Mayo Robson, F.R.C.S. and B. G. A. Moynihan, M.D., and F.R.C.S. Second Edition. London, Bailliere, Tindale and Cox, 8 Henrietta Street, Covent Garden, 1904. Price, 15s net.

Mr. Mayo Robson and Mr. Moynihan need no introduction to the medical profession. The work of both of these surgeons is well known, particularly in abdominal surgery. The present book, the product of their joint editorship, is one of medium octavo, of 500 pages, and deals with the "Diseases of the Stomach and their Surgical Treatment." It would appear as unnecessary to state the work will prove a valuable

contribution to the surgery of the stomach. This organ is now receiving more consideration at the hands of the surgeon than it did a few years ago. The liver, gall-bladder, the ovaries, tubes, appendix, etc., have for some time had the searchlights upon them, and have been before the professional eye. More recently these lights have been turned upon the stomach. It is needless to say that the book is most interesting reading. It is written in a lucid style, and is very well illustrated. There is an originality and independence of thought that lifts this book above the level of ordinary works on surgery. It sets out truly the application of surgery to the treatment of disease. The experience of the two distinguished authors is of a very hopeful character. Such conditions as severe and incurable dilatation of the stomach are made to come under the hand of the surgeon, and yield to his skill, when they had resisted every other line of therapeutics. Just twenty-seven years ago, the Sir John E. Erichson stated that while the science of surgery had much to accomplish, it must be taken for granted that the art of surgery had about reached its finality. It is dangerous to make predictions. The physician should read this book, because it tells him so clearly where his cases are likely to be benefitted by surgery; and the surgeon should read it, because it tells him how he can best accomplish the relief or cure of his patients. This work will well repay careful study, and we hope to see it widely read by the medical profession.

The book is got up in a very attractive form. The paper, binding, type, and illustrations are all that could be desired by the most exacting reader.

MISCELLANEOUS.

ANTIPHLOGISTINE.

Bruises, sprains and abrasions consequent upon tennis, golf, mountain climbing and other out door sports are prevalent at this season. Insect bites and stings are frequent and disabling. Country life also brings the results of contact with poison-ivy, poison-oak and the various venomous insects with their characteristic weapons of offense. In all these cases the physician's first thought should be Antiphlogistine. It reduces inflammation of all sorts better and more quickly than any other application, while for poisoned wounds and dermatitis venenata it is almost a specific.

GLYCO-THYMOLINE IN LEUCORRHOEA.

Mrs. R. P. had been under the care of a prominent physician who confined his treatment to hot vaginal douches of a one to two thousand solu-

on of Bichloride of Mercury. These douches produced a great deal of pain and did not appear to benefit the case materially. When the patient came to me I found the cervix much congested and the vaginal mucous membrane eroded to a considerable extent. Decided to try douches of weak solution of Glyco-Thymoline, to be taken as hot as possible. Comfort and improvement were noted from the first douche, and in a few weeks the woman was well.

W. B. KEENE, M.D., Philadelphia, Pa.

COMMENT ON ANTIKAMNIA AND HEROIN TABLETS.

Under the head of "Therapeutics," the *Medical Examiner* contains the following by Walter M. Fleming, A.M., M.D.,* regarding this valuable combination: "Its effect on the respiratory organs is not at all depressing, but primarily it is stimulating, which is promptly followed by quietude which is invigorating and bracing, instead of depressing and followed by lassitude. It is not inclined to affect the bowels by producing constipation, which is one of the prominent effects of an opiate, and it is without the unpleasant sequels which characterize the use of morphine. It neither stupefies nor depresses the patient, but yields all the mild anodyne results without any of the toxic or objectionable phases.

When there is a persistent cough, a constant "hacking," a "tickling" or irritable membrane, accompanied with dyspnoea and a tenacious mucous, the treatment indicated has no superior. In my experience I found one "Antikamnia and Heroin Tablet" every two or three hours, for an adult, to be the most desirable average dose. For night-coughs, superficial or deep-seated, one tablet on retiring, if allowed to dissolve in the mouth, will relieve promptly, and insure a good night's rest. In short, it will be found futile to delve for a more prompt and efficient remedy than "Antikamnia and Heroin Tablets" in all bronchial general irritability of the thoracic viscera."

SANMETTO IN URINARY DISEASES.

Dr. Mann Page, of Warm Springs, Va., Graduate Medical Department, University of Va., 1897, writing, says: "I have used Sanmetto in almost every case of kidney trouble that has come to me during the past year, and the results obtained in all cases from the "temporary congestion" so often accompanying "cold," etc., to the acute and chronic cases of "true inflammation" have been most gratifying. I am now using Sanmetto in several cases of albuminuria accompanying pregnancy, with benefit to every one of the patients. In cases of irritability of the bladder, from the least degree of this class to the most acute cases of inflam-

nation, following the abusive use of abortifacients, Sanmetto stands alone as a speedy and safe remedy. The success of Sanmetto in the relief of the depressing sequelae familiar to all who witness the unfortunate results of the "three days' home-gonorrhœa cure" is great. The relief of pain and amelioration of alarming symptoms inspires confidence in the grateful heart of these victims of contagion."

ABBOTT ALKALOIDAL COMPANY.

The Canadian Medical Profession will be glad to learn that a full line of Alkaloidal products and Alkaloidal specialties manufactured by the Abbott Alkaloidal Co., Chicago, Ill., can be obtained promptly by addressing the Canadian agents of the A. A. Co., Mr. W. Lloyd Wood, 66 Gerard East, Toronto, Ont., or Lefort & Co., 14 Hospital St., Montreal, Quebec. The well known and widely used specialties of the Abbott Alkaloidal Company include Abbott's Saline Laxative. "It does the business and never gripes" Abbott's Salithia and Calcalith, Calcidin, Nuclein and Intestinal Antiseptic W. A.

A copy of Abbott's Alkaloidal Digest, "A brief Therapeutics" with clinical applications, will be sent free on application to either of the Canadian agents.

A CORRECTOR OF IODISM.

Dr. W. H. Morse reports (Southern Clinic for May) success in the use of bromidia, which he says has proved corrigental of iodia. Discussing his results he says: Vomiting is so frequent and troublesome a symptom, in many diseases besides irritation and inflammation of the stomach, as to demand much practical attention from the physician. So, although the causes are so various, and although we are actually treating a symptom for this symptom bromidia is remarkably effectual. We have all employed the remedy for colic and hysteria, two disorders where nausea and vomiting are as pronounced as they are persistent, and almost the first evidence of relief is shown by the disappearance of these disagreeable symptoms. It is quite as efficacious for the nausea and vomiting from ulcer or cancer of the stomach. There is nothing that will more quickly check the vomiting, and the hypnotic effect is quite in order.

INTESTINAL PARASITES.

Messrs. Battle & Co., have just issued the third of the series of twelve illustrations, of the Intestinal Parasites, and will send them free, to the physicians on application.

ADRENALIN IN HAY FEVER.

Any reliable remedial agent that is valuable in the treatment of this malady is welcomed both by the physician and his patients who may be hay fever sufferers. The etiology, pathology, prophylaxis and treatment of this affection have often been the subject of study and experiment by physicians and also by intelligent laymen. The disease has been described as a catarrhal affection of the conjunctivae and the mucous at about the same date in a given case. Another view is that the disease is a neurosis, and that the local symptoms (rhinorrhea, sensory disturbance of the respiratory tract, characterized by an annual recurrence, etc.) are due to vasomotor paralysis. The most conspicuous symptoms of hay fever are a burning and itching sensation in the nasal region and between the eyes; violent paroxysms of sneezing; a copious discharge of serum and liquid mucus from the nasal passages; profuse lacrimation; now and then, febrile manifestations; frontal headache; and in not a few cases, some asthma. The diagnosis having been established the subject of prevention and treatment is of the utmost importance. It would be utterly useless and wearisome to attempt to review the list of remedies and the methods of treatment that have been proposed for this disorder. The interests of physicians and patients will best be served by a brief recital of facts respecting the most successful mode of treatment known at this time. A glance at the list of symptoms and a brief consideration of the pathology of hay fever lead to the immediate conclusion that the chief indications are to check the discharge, allay the irritation that gives rise to the paroxysms of sneezing; reduce the turgescence of the nasal mucosa and relieve the stenosis. The only single remedy that meets these indications is *adrenalin*, as represented in Solution Adrenalin Chloride and Adrenalin Inhalant. By stimulating the vasomotor supply it contracts the arterioles, and thus promptly and efficiently relieves all the annoying symptoms referable to vasomotor paralysis. Moreover, by its powerful astringent action upon the mucous membrane, it blanches completely in a few moments, and renders to the patient a positive degree of comfort. Indeed the results that have been accomplished with Adrenalin in this field alone are remarkable, and of the utmost importance. Messrs. Parke, Davis & Company, Manufacturing Pharmacists and Biologists, of Walkerville who offer this valuable astringent agent, have also prepared a very complete treatise on hay fever, asthma, bronchitis and similar troubles, with full information relative to the treatment of these maladies with Adrenalin and other agents. This booklet has already been forwarded to a number of physicians who have applied for the same, and others interested in the subject can obtain a copy, post paid, by applying to this firm.

JAMES THORBURN, M.D., Edin., Toronto.

Ex-President College Physicians and Surgeons, Ontario, Ex-President Canadian Medical Association, Emeritus Professor of Therapeutics, University of Toronto ;
Surgeon Major (retired) Q.O.R., and Consulting Surgeon
Toronto General Hospital

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ON PANCREATIC INFLAMMATIONS IN THEIR RELATIONSHIP TO CHOLELITHIASIS, AND THEIR TREATMENT.

By A. W. MAYO ROBSON, F.R.C.S.,

Vice-President and Hunterian Professor Royal College of Surgeons of England.

Mr. President and Gentlemen,- Your kind invitation to give the Address in Surgery before the Canadian Medical Association, accompanied as it was by other temptations, especially that of a visit to this delightful and important part of Greater Britain, left me no choice but to accept the proposed honor.

My only difficulty lay in the selection of a subject, but as I have been for some time working on the pathology and surgery of the pancreas, I ventured to think that pancreatic inflammations in their relationship to cholelithiasis might prove of sufficient interest and importance to engage your attention.

If my surmise falls short of my wishes and of your expectation, I must beforehand crave your forgiveness.

Among the many complications of gall stones, pancreatitis in its various forms is now known to be one of the most important, though the relationship has only comparatively recently been recognized.

The bile ducts and the pancreas are so intimately related in their development and their anatomy that it can excite no surprise to find them frequently associated in their diseases; and though we frequently find cholelithiasis without pancreatic troubles, it is much less common to have inflammation of the pancreas, whether acute, subacute or chronic, without finding common duct cholelithiasis. The reason for this association is not far to seek; it is due to the junction of the common bile duct and the duct of Wirsung at the ampulla of Vater, and their common opening into the duodenum, a channel always containing organisms ready, under certain conditions, to invade and become virulent.

Pancreatitis is probably always a secondary disease and usually dependent on infection spreading from the common bile duct or duodenum. It may be asked, if common duct cholelithiasis and pancreatitis are so

*Address in Surgery delivered before the Canadian Medical Association at Vancouver, B. C., August 24th, 1904.

often associated, who should some cases of common duct obstruction go on for months or years without the pancreas participating?

I hope to show by clinical evidence that the explanation of the presence or absence of pancreatitis as a complication of cholelithiasis is an anatomical one, though the degree of inflammation when infection does occur, is in a great measure a vital process, dependent on the powers of resistance of the individual.

I must ask you to excuse me for taking you back to the dissecting room for a few minutes, as, though doubtless you are well acquainted with the normal anatomy of the pancreas there may be some who are unacquainted with the great number of variations that may be encountered; which varieties may save a patient from or may commit him to pancreatitis should he be unfortunate enough to suffer from common duct cholelithiasis.

The common bile duct, starting by the junction of the cystic and hepatic duct, courses along the free border of the lesser omentum associated with the portal vein and hepatic artery; it then passes behind the first portion of the duodenum, and soon comes into relation with the pancreas, which it either grooves deeply or passes through or behind, before it pierces the wall of the second part of the duodenum, where it empties into the diverticulum of Vater along with the duct of Wirsung. It may be divided into four portions: (a) The supra-duodenal portion; (b) the retro-duodenal portion; (c) the pancreatic portion; (d) the intraparietal portion. The latter two only are important for our present purpose.

If the choledochus passes behind and not through the head of the pancreas, the duct may escape pressure when the pancreas is congested or otherwise swollen; whereas if it passes through the gland, any congestion or swelling of the pancreas will, by pressing on the common bile duct, bring on jaundice, with its various sequelæ. Thus is explained, to my mind, many of the cases of so-called catarrhal jaundice, which may come on as an extension from gastro-duodenal catarrh, or in the course of a pneumonia, or during typhoid fever, influenza and other ailments, and which I believe to be often dependent on catarrhal inflammation of the pancreas, leading to pressure on the bile ducts. In some cases I have proved this hypothesis to be correct at operations undertaken for chronic jaundice.

As the duct is completely embraced by the pancreas in 62 per cent. of all cases, we may conclude that in nearly two-thirds a swelling of the head of the pancreas will produce jaundice; and curiously, this percentage coincides with Dr. Cumming's and my clinical observations and pathological investigations on the urine of pancreatic cases.

Not only so, but when the head of the pancreas embraces the common bile duct, should a gall stone pass down, it will almost certainly exercise pressure on the gland, and thus directly interfere with its function and with the discharge of its secretion.

The fourth portion is where the duct enters the wall of the second part of the duodenum and ends in the ampulla of Vater, into which small cavity the duct of Wirsung also debouches. This part of the common duct comprises all that portion of the canal contained in the thickness of the wall of the duodenum. It passes obliquely through the muscular coat of the intestine, and then dilates into a little reservoir underneath the mucous membrane, into which the main pancreatic duct also opens. This is known as the ampulla of Vater. This ampulla, a little oval cavity, may be well seen in a section of the wall of the duodenum, in the axis of the common duct. The opening of the common duct is above that of the pancreatic duct, and the two are separated by a little transverse fold of mucous membrane. The ampulla measures from six to seven millimetres in length, and from four to five in breadth, and with the termination of the two ducts, is surrounded by a thin layer of unstriped muscular tissue, forming a sphincter (Oddi).

The ampulla opens into the duodenum by a little round or elliptical orifice, which is the narrowest part of the bile channel. It is important to note that the length of the diverticulum of Vater may vary from zero to 11 millimetres, the average being 3.9 millimetres, according to Opie, who measured one hundred specimens. Viewed from the interior of the duodenum the ampulla forms a rounded eminence of the mucous membrane, known as the *caruncula major* of Santorini, the opening being seen at the apex of the caruncle. It is distant 8 to 12 centimetres from the pylorus. Above it there is constantly found a small fold of mucous membrane, which must be raised in order that the caruncle and its orifice may be clearly seen. Running downwards from the caruncle is a small vertical fold of mucous membrane known as the *frenum carunculæ*. Above the *caruncula major* is found a smaller eminence, the *caruncula minor*, marking the termination of the accessory pancreatic duct, or duct of Santorini, which opens into the duodenum about three-quarters of an inch above the biliary papilla.

The mode of formation of the ampulla of Vater and the termination of the common and pancreatic ducts are liable to great variations.

Letulle and Nattan Lorrier distinguish four types, to which may be added a fifth, recently shown by a dissection now in the Hunterian Museum.

The first type is the classical one described above. In the second type the pancreatic duct joins the common duct some little distance from

the duodenum, the ampulla of Vater is absent, and the duct opens into the duodenum by a small, flat, oval orifice. In the third type the two ducts open into a small fossa in the wall of the duodenum, while the caruncle and the ampulla of Vater are absent.

In the fourth type the caruncle is well developed, but the ampulla is absent, two ducts opening side by side at the apex of the caruncle.

In the fifth type the common bile duct opens along with the duct of Santorini and Wirsung's duct enters the duodenum separately.

It will be readily understood that under ordinary circumstances when a gall stone passes along the common bile duct and reaches the ampulla of Vater, it will not only occlude the bile passages, but also the chief excretory duct of the pancreas, the secretion of which will be retained. Should infection occur, pancreatitis becomes inevitable, and on the condition of the individual, as well as on the nature of the infection, will depend what occurs, whether a mild catarrh of the pancreatic ducts, an interstitial pancreatitis, an extremely serious suppurative catarrh, or a parenchymatous inflammation in the shape of acute pancreatitis.

Opie, finding in one case a very small gall stone and a large ampulla of Vater, constructed a pretty theory, which is probably true in some rare cases, as in the one reported from Dr. Halsted's clinic in the Johns Hopkins Hospital, and in another case that occurred in Buffalo, which was mentioned to me by my friend, Dr. Roswell Park, but which I believe has not yet been reported. Opie says that under these circumstances the bile and pancreatic ducts are converted into one direct tube, as shown in the diagram, and that the bile being forced into the pancreatic duct, sets up acute pancreatitis.

He appears to think that pure non-infected bile is capable of doing this, and he has apparently demonstrated the possibility by experiments on animals. For my own part, I believe that infection is the important factor, and that the bile is simply the conveyer of infection.

That this anatomical arrangement described by Opie is not necessary in order that acute pancreatitis may develop is shown by cases reported where no gall stones were present, and by an instructive case under the care of Dr. Fison, of Salisbury, where at the autopsy of a fatal acute pancreatitis a gall stone was found completely filling the ampulla of Vater and occluding both the bile and pancreatic ducts. It will be seen that while the normal termination and the second variety of termination of the ducts will favor the onset of pancreatitis in case of common duct cholelithiasis, the variations 3 and 4, in which the two ducts are separate, will possibly save the patient from the serious secondary pancreatic troubles, and in variation 5, a small portion of the gland only will become infected.

1. Some gall stones are so large that they never reach the pancreatic portion of the duct, but remain in the supra-duodenal portions of the common duct, producing jaundice, but no pancreatitis. The following is an example.

Mr. S., aged sixty-five, had for two years been subject to occasional attacks of epigastric pain. In January, 1903, a severe attack was followed by jaundice, since which time he had rapidly lost weight, and the jaundice had never disappeared. Pain after food had been a marked feature. He had neither vomited blood nor had melena. There was no dilatation of the stomach, and no evidence of tumor. The recti were rigid. He was seen by a well-known physician, who diagnosed cancer of the pancreas. An examination of the urine, however, showed an entire absence of pancreatic crystals, proving the absence of cancer and of inflammation of the pancreas. An operation was performed on November 24th, 1903, when a gall stone the size of a filbert was discovered in the supra-duodenal portion of the common duct and removed through an incision, which was afterwards sutured. The pancreas was normal. The gall bladder was drained. Recovery was uninterrupted, and the patient is now well.

2. In some cases the bile ducts and pancreatic ducts open by separate orifices, as shown in the illustration, and any gall stone passing down the common duct will then not necessarily compress or occlude the pancreatic duct.

3. In exceptional cases the duct of Santorini is the principal outlet for the pancreatic fluid, it being of such a size as to afford a safe outlet to the secretion, even when the duct of Wirsung is obstructed.

In order to make the relationship between gall stones and inflammation of the pancreas quite clear, I shall give the classification of pancreatitis that I recently proposed in the Hunterian lectures, which, I believe, includes all the varieties. Pancreatic inflammation may be catarrhal, in which the inflammatory trouble is in the ducts, or parenchymatous, in which the substance of the pancreas is involved. The former resemble the different forms of cholangitis, with which, indeed, they are frequently associated; the latter bear more resemblance to inflammatory affections of the appendix, "suppurative and gangrenous appendicitis." The following show the classification at a glance:—

Catarrhal Inflammations.—(a) Simple catarrh, acute and chronic, (b) suppurative catarrh, (c) pancreo-lithic catarrh.

Parenchymatous Inflammations.—Acute: (a) Hemorrhagic pancreatitis—(1) Ultra-acute, in which the hemorrhage precedes the inflammation, the bleeding being profuse, and both within and outside the gland; (2) acute, in which inflammation precedes the hemorrhage, which

is less profuse and is distributed in patches through the gland. (b) Gangrenous pancreatitis; (c) suppurative pancreatitis (diffuse suppuration). Subacute: Abscess of the pancreas (not diffuse suppuration). Chronic: (a) Interstitial pancreatitis—(1) Interlobular, (2) interacinar; (b) cirrhosis of the pancreas.

Although in my address to-day I am only dealing with one cause of pancreatic trouble, yet it is the chief one, and in a very large percentage of cases the only cause of pancreatitis in its various forms, but in order to make the position clear I will relate the other etiological conditions.

The etiology of pancreatitis may be classified under predisposing and exciting causes. Among the predisposing causes are: (1) Obstruction in the ducts, the result of gall stones, duodenal catarrh, pancreatic calculi, cancer of the papilla or of the head of the pancreas, ulcer of the duodenum, followed by cicatricial stenosis of the papilla, ascarides, and lumbrici; (2) injury either from a bruise, as by manipulation in operating, or from a crush, as by a blow in the epigastrium, or from wounding by a sharp instrument; (3) hemorrhage into the gland; (4) general ailments, such as typhoid fever, influenza and mumps; (5) certain anatomical peculiarities in the pancreas or its ducts; (6) atheroma or fatty degeneration of the blood vessels; (7) new growth, *e. g.*, cancer or sarcoma.

The chief exciting causes are: (1) Infection conveyed (a) from the blood, as in syphilis or pyemia; (b) from the duodenum, as in gall-stone obstruction or gastro-intestinal catarrh; (c) by extension inwards from adjoining organs, as in gastric ulcer or cancer eroding the pancreas. (2) Irritation, as in alcoholism (doubtful).

So long as the concretions remain in the gall bladder or cystic duct, it is unlikely that the pancreas will participate in the cholecystitis, unless the gland has been originally infected from the duodenum, as possibly occurred in the following case: In this case, gall stones in the gall bladder were associated with catarrh of the pancreas, which must have either been due to an extension of the catarrh of the gall bladder and bile ducts to the pancreas, or have resulted from the passage of a gall stone from the common duct on some former occasion, which had led to infection both of the bile and pancreatic ducts. A lady, aged fifty, had for several years suffered from attacks of distinct biliary colic, which during the past two months had been followed by jaundice, fever and collapse. There had recently been loss of flesh. On examining the urine, fine pancreatic crystals were discovered, and at the operation on April 30th, 1903, forty gall stones were removed from the gall bladder and cystic duct. None were found in the common duct, though the head of the pancreas was distinctly swollen and harder than normal. The gall bladder was drained. The

lient made a good recovery and is now well. Normal weight has been gained, and there is no longer any evidence of disturbed metabolism.

Even if the gall stones pass into the common duct and are not long retained in it, a catarrhal pancreatitis may supervene, as in the following case: A patient, aged thirty-eight, after being subject to indigestion for years had biliary colic in July, 1899, and passed gall stones, which were found in the motions. Subsequently the attacks of pain were frequent and severe, necessitating the use of morphia. They were usually accompanied by icterus, which, though slight, probably never quite disappeared. When I saw him in November, 1903, he had lost flesh and was prevented from carrying on his professional duties. The metabolic and digestive signs of pancreatic catarrh were well marked. At the operation, on November 23rd, 1903, no gall stones were found, though the gall bladder was thickened and adherent to contiguous organs. The pancreas was larger than usual, though not very much swollen. Cholecystotomy led to recovery, though the drainage of the bile ducts had to be continued for three months. The patient is now well.

In this case the pancreatic catarrh had evidently been set up by passage of gall stones through the common duct. The pancreatitis had, however, persisted, and was not only keeping up painful symptoms, but leading to obstruction of the bile ducts and to interference with nutrition. In this case would formerly have been called catarrhal jaundice, where it was really due to catarrhal pancreatitis, as proved by the digestive and metabolic signs, and later by operation.

I could relate other instances, but this case will suffice to show that pancreatic catarrh may be produced by a passing gall stone and persist even if the cause has disappeared, and that drainage of the bile ducts is followed by cure.

If after some time the stone passes, the pancreatic catarrh may subside and leave no trace, or the swelling of the pancreas may persist, become true interstitial pancreatitis, and for a long time keep up pressure on the common bile duct, leading to a persistence of the jaundice, though there is no concretion left to cause obstruction, nor any evidence of distention of the liver beyond the jaundice due to mechanical obstruction. It may be explained some of the cases of very chronic jaundice, with associated chronic biliary catarrh, a number of which cases I have operated

While one could not say that there is no such disease as chronic catarrhal jaundice, I suspect that many cases so designated are really instances of chronic interstitial pancreatitis, in which the common bile duct

is compressed by the swollen pancreas. The following case is a good example :—

Mr. H., aged twenty-six, had had jaundice since the age of seventeen, it having supervened upon a severe attack of what appeared to be biliary colic, of which he had had several seizures since the age of fourteen. For two or three years he had had severe ague-like attacks, and during that time he lost very seriously in weight and strength; but during the past two years there had been no rigors, and he had also been free from the severe paroxysms of pain, though he had had slighter seizures, after all of which the jaundice became more intense. The patient was then only weighing 126 lbs. and all the bile was apparently passing into the urine and none by the bowels. There was some swelling in the region of the pancreas, besides slight enlargement of the liver and a very decided enlargement of the spleen. Fine pancreatic crystals were found in the urine.

Cholecystotomy was performed on January 31st, 1901, when the gall bladder was found contracted and adherent, and the head of the pancreas enlarged and very hard, but no gall stones were present. For a few days the jaundice was deeper; it then became gradually less, until it almost disappeared. In ten days the stools became bile-stained, and had since retained their color. He returned home on April 16th, having gained nearly half a stone in weight. Oct., 1901.—After the previous operation the patient was well for some months, except for slight jaundice. Recently there had been a little discharge of bile from the fistula, which he wished to have cured on account of the inconvenience. Cholecystenterostomy was performed on October 3rd, 1901. The sinus was dissected out and the fundus of the gall bladder connected to the transverse colon. The patient made a good recovery from the operation and left looking much better. When heard of later he was following his occupation.

If the gall stone causing obstruction be removed by operation from the common duct and drainage of the infected bile ducts be effected before the catarrhal has passed into the interstitial form of pancreatitis, a complete cure may be expected, as in the following cases :—

1. The patient, a lady, aged thirty-four, had had symptoms of gall stones for four years and had been under treatment for ulcer of the stomach, but there had been no hematemesis. Four months previously jaundice had come on after an attack of pain, since which time the attacks had been frequent, and were always followed by an increase of the jaundice and by rigors and fever. On one occasion the gall bladder was distended; when seen there was a slight tinge of jaundice. She had lost 42 lbs. in weight. There was an absence of enlargement of the liver or

gall bladder, but marked tenderness over the gall bladder was elicited. Pancreatic crystals were found in the urine, and digestive symptoms were present.

At the operation on April 23rd, 1903, one large calculus was removed from the cystic duct and some smaller ones from the common duct by choledochotomy through separate incisions in the two ducts. The common duct was sutured and the cystic duct drained. The pancreas was found to be enlarged and inflamed. The patient made a good recovery and is now well.

Were it necessary I could give a good many examples, but another will, perhaps, suffice.

2. The patient, a lady, aged fifty-nine, began to suffer from abdominal pain followed by jaundice and vomiting twenty-six years ago, and she had been subject to attacks at longer or shorter intervals ever since. Fifteen years ago she was in bed for three months with constant pain, but never had rigors. A fortnight ago she had a severe attack of pain followed by jaundice, which persisted. She had lost 56 lbs. in weight. There was no enlargement of the liver or gall bladder, but some dilatation of the stomach. Pancreatic crystals were found in the urine. At the operation, on March 10th, 1903, a small gall bladder was found, containing two gall stones, which were removed and the gall bladder drained. The common and hepatic ducts contained many stones, which were removed through an incision in the common duct. The pancreas was slightly swollen. The patient made a good recovery and remains well.

The explanation of the pancreatitis in these two cases was manifestly the obstruction of the pancreatic duct, with infection of the secretion, but the complete recovery after operation showed that the inflammation was probably only catarrhal, and not advanced interstitial trouble.

If the gall stone obstructs the common duct for long, what was at first a simple catarrhal pancreatitis may assume a truly interstitial form, and unless drainage of the bile ducts is continued for some time, or permanent drainage in the shape of cholecystenterostomy is established, relapse will speedily occur. The following case is an example:—

Mrs. W., aged fifty-seven, had had two operations previously in Scotland. On the occasion of the first operation, in September, 1902, a number of gall stones were removed from the gall bladder, which was drained for a few days, but after the wound had healed the attacks had been repeated as before. A second operation was undertaken by the same surgeon, without finding anything definite. After the wound had healed and the temporary drainage had ceased, the attacks again returned, and the subsequent history up to the time of my seeing her was that she had almost daily attacks of pain, followed by slight jaundice, and

on five or six occasions, usually at intervals of a month, she had had violent seizures necessitating the use of morphia. About five weeks ago the pain was so violent as to cause her to faint, and just before coming to London another violent seizure, accompanied by collapse, occurred. A rigor, with high temperature, 104 or 105 deg., had followed each attack, the temperature between the seizures rising nightly to 101 deg. F. or 102 deg. F. She was rapidly losing flesh and strength. An examination of the urine by Dr. Cumming showed no albumin or sugar, but well-marked pancreatic crystals, which dissolved in from one to one and a half minutes, rendering, along with other signs, the diagnosis of chronic pancreatitis certain. At the operation, on November 20th, 1903, the adhesions were found to be most extensive. There was well marked enlargement and hardness of the pancreas along its whole length, but it was not nodular. The common duct was carefully examined, but found to be free from concretions, and on opening the gall bladder a probe was passed through it, and the cystic and common ducts, into the duodenum. While the probe was in position, the pancreas was manipulated and found to compress the duct, thus accounting for the obstruction. Cholecystenterostomy was, therefore, performed, the union being effected to the colon by means of a decalcified bone bobbin. At the time of operation the gall bladder was separated from its fissure in the liver in order to make it reach the bowel without tension. For a few days after operation, bile was discharged from the torn liver surface in free quantities, but there was no leakage from the newly joined viscera. As the bile obtained a free passage into the bowel, it gradually ceased being discharged from the liver, and the tube was able to be left out at the end of ten days. The wound healed by first intention, and the patient was up at the end of three weeks. She was then able to take and digest her food, and has since been quite free from her old attacks.

If the interstitial pancreatitis has persisted for some length of time, it is possible that recovery may be incomplete, and although the jaundice may disappear and the digestive symptoms may be alleviated, the metabolic signs found in the urine many months or even years subsequently, show that recovery is only partial. The following are examples:—

Mr. D., aged forty-five, had had painful epigastric attacks for twelve months, with vomiting, but no jaundice. There had been deep jaundice since January 1st, with ague-like attacks, and the patient had lost 35 lbs. in weight. Cholecystotomy was performed on March 29th, 1898. Thickened duct felt, together with swelling of the pancreas; thought to be cancer of the head of the pancreas and common bile duct. Drainage of the gall bladder for ten days. The patient made a complete recovery, and in August was apparently quite well, having gained 14 lbs. in

eight. He was in good health in 1901. Though apparently well in January, 1904, an examination of the urine gave the pancreatic reaction, and showed that the original damage to the pancreas had not been completely repaired.

Mrs. D., aged forty-six, had had spasms for years. Acute seizure in July, and three times since. Since July, pain and sickness every two weeks. No tumor felt at any time; jaundice occasionally, after an attack of pain; lost 14 lbs. in weight. She had never vomited blood and never had melena. There was tenderness over the gall bladder, but no tumor. Slight enlargement of the head of the pancreas. Cholecystotomy was performed on December 11th, 1899. Empyema of the gall bladder. Many stones removed from the gall bladder and cystic duct. Adhesions broken down. Nodular condition of the head of the pancreas found. The patient made a good recovery and was well in 1904, though an examination of the urine showed the pancreatic reaction, and proved that the metabolic functions of the pancreas were still not normal.

In some cases where operation has been delayed, or drainage of the bile ducts not performed or not long enough continued, the original interstitial pancreatitis may pass on into the interacinar variety, in which the islands of Langerhans become involved and glycosuria ensues, as in the two following cases:—

Mrs. C., aged fifty-one, who was suffering from persistent jaundice with periodical pains and ague-like seizures that had extended over a long period, was operated on in July, 1895, when several gall stones were removed and others crushed in the common duct. A tumor of the pancreas was felt, which it was thought at the time might be malignant. The gall bladder was, therefore, drained into the duodenum by a cholecystenterostomy. The patient completely recovered, and has remained well since the operation, over nine years ago, but examination of the urine recently by Dr. Cumming showed there was an abundance of dextrose, ~~but no~~ acetone or diacetic acid. Pancreatic crystals were obtained by the "A" reaction, which dissolved in three-quarters to one minute, but none could be isolated by the "B" method. This showed that although the patient has been relieved by the operation and has apparently enjoyed good health, yet that she is living with a damaged pancreas and consequently glycosuria.

Mr. D., aged forty-two, had an attack of pain in the right hypochondrium ten years ago, but no jaundice. He had been free from attacks up to six weeks ago, when he had a severe attack of pain in the right hypochondrium, radiating to the back and shoulders, accompanied by rigors and vomiting and followed by jaundice. The jaundice had persisted up to the present; no swelling to be felt. An exploratory operation

was performed on October 27th, 1898, when a mass, thought to be growth in the head of the pancreas, was discovered. The patient made a good recovery, with a great relief to the jaundice. I suspect the enlargement of the head of the pancreas was chronic pancreatitis, as it was too soft for scirrhus. I very freely manipulated it to feel if there was a gall stone in the termination of the common bile duct, and this may have dislodged the obstruction, leading to the relief of the jaundice. A specimen of his urine was obtained in 1904, and although he was reported to be quite well, this was found to give crystals by the "A" reaction, which dissolved in half a minute, and to contain sugar in fair quantity.

This, along with other cases that I know of, leads me to think that it is unwise not to thoroughly drain the bile ducts, and I consider that drainage ought to be continued until the bile becomes free from organisms and its normal route is free from obstructions.

In certain cases, doubtless, recovery occurs without operation, and I have notes of one case where a gentleman of advanced age had deep jaundice associated with glycosuria and with well-marked pancreatic reaction in the urine, pointing to the case being one of pancreatic diabetes. Under general treatment, combined with massage, he regained his health, and is now said to be quite well. In this case it is quite possible that the massage may have dislodged a concretion which was blocking the common bile duct and the pancreatic duct, but as no search was made in the feces, this cannot be proved. As the patient lives abroad, we have not been able to test the urine, which I suspect will still contain glucose.

This case raises the question whether operation ought to be declined because of the presence of a small amount of sugar in the urine. In future, should the patient's condition be fair, I shall feel inclined to recommend operation in order to remove the obstruction, and by drainage to arrest the pathological process going on in the pancreas.

Suppurative Catarrh.—It is well known that in some cases of obstruction of the common bile ducts by gall stones, the infective cholangitis may pass on into suppurative cholangitis, an extremely serious and frequently fatal disease; but until I reported my cases in the Hunterian lectures I believe it had never been suggested that the same condition may occur in the pancreatic ducts. The termination probably depends both on the vital condition of the individual and on the form of the infection, for in one of my cases streptococci were found in the pus, whereas usually the organism is the bacillus coli.

The following cases exemplify three different types of suppurative catarrh, which it will be seen is an extremely serious, though not necessarily hopeless disease if treated early. If the suppurative catarrh be diffuse and involve the ducts throughout the liver and pancreas, the as-

associated septicemia is very serious, as the following case seen with Dr. Hector Mackenzie proves:—

Mr. W., aged sixty-five years, seen on January 4th, 1904. He had had attacks of gall stones seven years before, and two seizures during the last two years, both of which were followed by jaundice. His present illness started on November 23rd, with severe pain, followed by jaundice. On December 20th a very severe attack of colic was followed by more intense jaundice and enlargement of the liver, with irregular temperature. The patient had had albuminuria for seven or eight years. When I saw him there was tenderness above and to right of the umbilicus and he had severe pain. A specimen of the urine was examined and found to give a marked pancreatic reaction (pointing to acute inflammation), and to contain calcium oxalate crystals. On opening the abdomen on January 7th, many adhesions were encountered, and on detaching the omentum, phlegmonous cholecystitis was discovered, with gangrene of the fundus of the gall bladder; pus escaped freely, but the peritoneal cavity was saved from being soiled by means of sponge packing. The common duct was enormously dilated and embraced by the swollen pancreas, but no gall stones could be felt. On opening the common duct a large quantity of pus and bile escaped. By means of the scoop passed into the common duct and the fingers passed behind the pancreas, a number of gall stones were extracted, but a hardness could be felt at the papilla which could not be removed. On laying this open after incising the duodenum, a gall stone was removed from the ampulla of Vater and pus was immediately seen to flow from the duct of Wirsung. The duodenum was then closed, the ingenuous upper part of the gall bladder was removed, and the common duct and gall bladder were drained. The patient bore the operation well, and from that time onward had no more fever, but for the fortnight during which he lived his temperature was persistently subnormal. He had no peritoneal symptoms, and the bowels were moved freely from the second day onward. Calcium chloride had been given before the operation, and at the operation he lost no blood. None was given subsequently to operation, as the rectum was intolerant of injections, and on the eighth day there was rather free oozing of blood from the drainage track, which had to be treated by gauze packing, after which the calcium chloride was renewed and no more bleeding occurred. On the eleventh day the patient became somnolent and declined to take food. From this time he got gradually weaker and died comatose on the fourteenth day in a condition almost resembling that associated with acute atrophy of the liver.

If the suppurative catarrh takes on a very acute form, the development of abscesses in the liver and pancreas may occur and the condition

becomes one of pyemia, when the chance of recovery will be very remote, as in the following case:—

The patient, a lady, aged sixty-five years, seen with Sir William Broadbent and Dr. Bousfield, was suffering from deep jaundice, suppurative cholangitis, pancreatitis and parotitis of pyemic origin; rigors, with a temperature of 105 deg. occurring daily, or even twice a day, the acute symptoms having come on within a fortnight, though there had been a history of gall stones for years. The common and hepatic ducts were filled with gall stones, which were removed through an incision in the common duct and a large quantity of extremely offensive pus and bile was evacuated. At the same time the right parotid gland (the seat of inflammation) was incised. The bile was examined bacteriologically and found to contain the bacillus coli in large numbers; next in numbers were streptococci and another rather fine bacillus, which appeared to grow anaerobically only, and there was a fine spore-bearing organism, probably the bacillus coli putrefaciens. The urine gave a well marked pancreatic reaction. The patient, who had also heart disease and albuminuria, appeared to be doing well for twenty-four hours, when she died suddenly, apparently from cardiac thrombosis.

If the suppurative catarrh assumes a subacute form, it may end in a simple pancreatic abscess, which can be successfully evacuated as in the following case:—

Mrs. P., aged sixty-one, gave the history of having been subject to biliary colic for three or four years, though there had been no jaundice till two and a half years ago, since which time the attacks of pain had always been accompanied by rigors and by deepening of the jaundice. Within a short time of my seeing her, the symptoms had become aggravated and the loss of flesh had become extreme. The patient was so ill that the question of cancer of the pancreas was raised, but the pancreatic reaction in the urine definitely pointed to inflammation and not to growth. At the operation I found the pancreatic portion of the common duct packed with large gall stones, and the head of the pancreas was markedly swollen. On passing the scoop through the opening in the common duct from the pancreatic portion of the duct, a stone the size of a cherry was extracted, it being covered with offensive pus. This had apparently lodged in a cavity in the head of the pancreas. A profuse discharge of bile and offensive pancreatic fluid, with pus, continued to pass for a week, after which the discharge became gradually less. She made a good recovery, and remains well a year later.

In general, subacute pancreatitis starting as suppurative catarrh, with the formation of a localized abscess, the pancreas may be so damaged that after the abscess has been cured by drainage, the extensive in-

terstitial pancreatitis may ultimately lead to the death of the patient at a longer or shorter interval, as in the following case:—

Mr. H., aged forty, had suffered from continuous fever, with exacerbations associated with rigors, that recurred almost daily. He gave the history of failing health for nine months and of having had gall stone attacks much longer, but the acute symptoms associated with jaundice had only been present for a fortnight before I saw him. The pancreatic reaction was found in the urine. At the operation on October 11th, 1900, he was far too ill to bear a prolonged search, and as the adhesions were very firm, I felt it desirable only to drain the bile ducts through the gall bladder, though a marked swelling of the pancreas made it appear probable that an abscess might be present. A large quantity of muco-pus drained from the gall bladder, and a number of gall stones were removed. The abscess of the pancreas discharged through the drainage tube, after which the pancreatic swelling subsided. The patient made a slow though steady recovery, and returned home early in December. Though he was able to get out and to take food, he never fully regained his strength, and died in February of the following year. At the necropsy the pancreas was found to be much enlarged, and to be the seat of interstitial pancreatitis. The cavity where the abscess had been was occupied by a little pulpy material, but no further collection of pus was found, nor were any gall stones discovered in the bile ducts. A microscopic examination of the pancreas showed advanced interstitial pancreatitis.

Cirrhosis or Atrophy of Pancreas.—If the infective catarrhal condition persists and does not assume the more dangerous suppurative form, or even if simple obstruction of the pancreatic duct persists from any cause, with only mild infection, we may have an almost analogous condition to the one occurring in cirrhosis of the liver due to the development of fibrous tissue. This more chronic form of interstitial pancreatitis ends in cirrhosis or atrophy of the pancreas, which is probably inevitably fatal from glycosuria. I think it is possible that if it were discovered at an early stage it might be arrested by the removal of the cause, though when fully developed the condition is probably not amenable to any form of treatment.

Acute Pancreatitis.—If a small gall stone happens to descend into an unusually large diverticulum of Vater and to lodge there, it will make a thorough channel from the common bile duct into the pancreatic duct, and so set up acute pancreatitis, the infected bile being forced direct into the pancreatic duct, as in Dr. Halsted's case reported in Opie's work on the pancreas.

But the anatomical conditions just mentioned, though evidently potent, are certainly not necessary for the production of acute pancreatitis. Any gall stone or stones impacted in the pancreatic portion of the duct, or even filling the ampulla of Vater, may produce acute pancreatitis, as in a case under the care of Dr. Fison, of Salisbury (*Lancet*, 1904).

A man, aged thirty-nine, had a sharp attack of diarrhoea on March 27th, 1904, having been previously constipated. The next day, about one and a half hours after dinner, he was seized with severe epigastric pain, followed by vomiting. At 5 p. m. he looked anxious and ill, and the abdomen was tense and tympanitic, but there was no jaundice. The vomiting persisted. There was tenderness over the gall bladder, and to a less degree over the stomach, but no enlargement of the liver or any indication of tumor. Temperature, 98 deg.; pulse, 110.

The next day the temperature was 97 deg. and pulse 120, the vomiting continuing, morphia was given. On the 30th, the temperature was 96.8 deg., the pulse 125, small, weak and thready, respiration 36. The pain was easier. Urine scanty and dark. Operation on evening of the 30th, fifty-four hours after first attack of pain. Very extensive fat necrosis found in subcutaneous tissues and in omentum, mesentery, etc. Large quantity of brown, inoffensive fluid in peritoneum. Incision made into tissues around pancreas through meco-colon. Gall bladder drained through another incision, many gall stones removed. Free drainage of abdomen. After recovery from anesthetic the vomiting persisted, and the pulse remained absent from the wrist up to death some hours later. At post-mortem examination, a pint of bloody fluid in peritoneal cavity. Base of meso-colon filled with friable, offensive material, blackish-brown in color and here and there streaked with pus. Pancreas much swollen, and weighed seventeen ounces. Hemorrhagic infiltration in centre of body and another in tail, consistency very firm, with swelling of lobules. In the cystic duct were three gall stones, in the common duct four, and in the hepatic duct four. One gall stone, three-eighths of an inch in length, completely filled the ampulla of Vater, into which the duct of Wirsung opened, one-third of an inch from the papilla. The duct of Wirsung did not contain bile.

Urine sent for examination by Dr. Cummidge showed crystals soluble in one-half minute by the "A" reaction, and a few crystals by the "B" reaction soluble in the same time.

The following is Dr. Salisbury Trevor's report of examination of the pancreas :—

The gland is enlarged in all its diameters, the margins being rounded off and producing, as a consequence, a sausage-shaped contour. In the head, the middle of the body and the tail are chocolate-colored areas

which are fairly sharply differentiated from the surrounding parenchyma in which the normal lobulation is visible. The duct of Wirsung is not bile-stained. The portion of common bile duct attached to the head of the gland appears to be somewhat dilated. Around the gland, as well as in it, are numerous typical foci of fat necrosis.

Microscopical Examination.—Sections have been prepared from the head, body and tail in most instances to include the chocolate-colored areas as well as apparently normal parenchyma.

General Features.—The dark colored areas are due to necrosis of the parenchyma, associated with hemorrhage, and in the sections from the head and tail are demarcated off from the neighboring gland acini by well marked zones of inflammatory small-celled infiltration. In the tail section, inflammatory reaction is absent, the necrosed areas merging gradually with the unaffected parenchyma. In the necrosed areas the gland parenchyma is only barely recognizable by a faint alveolar structure, all gland elements having disappeared. The whole of these areas strain badly. In the necrotic portions the smaller blood vessels are filled with more or less hyaline thrombi. Around the necrotic areas in the head and body is a deposit of old blood pigment, and the appearances rather suggest that here the lesions are of older date than those in the tail. Inflammation is most marked in sections of the head. The remaining gland parenchyma is badly preserved owing to auto-digestion, and the head appears to show a slight grade of chronic interstitial pancreatitis of the interlobular type. Throughout the sections the islands of Langerhans are found with difficulty, and from comparisons with other sections their number in the tail sections, at all events, appears to be diminished. Two of the islands of Langerhans found in the tail sections are very large in size; the cells, however, are rather broken up and into one of them hemorrhage has occurred. Minute changes are not recognizable, owing to bad preservation of the tissue. The epithelium of Wirsung's duct shows distinct signs of a catarrhal change.

Summary.—The condition is one of acute pancreatitis with hemorrhage and necrosis (the acute form of hemorrhagic pancreatitis in Mayo Robson's classification).

The following is a case of gangrenous pancreatitis due to gall stones, which recovered after operation.

Mr. S., aged fifty-eight, had for six years been subject to paroxysmal attacks of acute pain starting in the right hypochondrium and radiating over the abdomen and through to the right scapula, the attacks being accompanied by vomiting and more or less collapse. On several occasions he had passed small gall stones.

About ten weeks before I saw him he was seized with an attack, which did not, as usual, yield to morphia; the liver became enlarged and tender; there was a great amount of flatuency and acidity, and a feeling of discomfort generally. After this seizure he had ague-like attacks and jaundice of varying intensity, and from that time a tumor steadily developed in the epigastric and right hypochondriac regions. He rapidly lost flesh and strength, and when he was taken into a surgical home for operation he was so feeble and emaciated that it was questionable whether he would be strong enough to bear it. Jaundice was well-marked and the tumor in the upper abdomen, which was tense, tender and fluctuating, was still enlarging. He had had diarrhoea six times a day for several days before admission, and the motions were bulky and pale and contained fat. The urinary pancreatic reaction was well-marked. Just before operation he vomited clear fluid, not containing bile. Operation was performed on April 5th, 1902, when a pancreatic cyst was exposed between the stomach and colon, containing four pints of straw-colored fluid. Inside the cyst was found a mottled black slough with grey patches, two and a half to three inches long by one and one-quarter inches broad, and one-half inch thick, evidently pancreas. The gall bladder and ducts contained thirty stones, two the size of walnuts; one of these was found at the junction of the cystic and common duct, and pressing on the latter. The cyst of the pancreas and the gall bladder were drained by separate tubes with the stomach and the first part of the duodenum between them. On being put back to bed the patient was quiet, but vomiting frequently. He made a steady recovery without any untoward symptoms and left for home on May 2nd, 1903. On March 3rd, 1904, the patient was the picture of health and had gained 21 lbs. in weight. He told me that the gall-bladder opening had closed in six weeks and the pancreatic fistula in nine weeks.

Symptomatology.—It is quite unnecessary for me to give the ordinary symptomatology of cholelithiasis, or of pancreatitis in its various forms, as I have done that elsewhere, but it may reasonably be asked, How can it be told when catarrhal or interstitial inflammation of the pancreas has supervened on cholelithiasis? So long as the concretions remain in the gall bladder or cystic duct it is extremely unlikely that the pancreas will participate in the cholecystitis, unless the pancreatic duct has become infected at the same time as the bile ducts.

As soon as gall stones pass into the common duct, even if they are not long detained in it, a catarrhal or even a parenchymatous pancreatitis may supervene, but if the gall stone remains in the pancreatic or interparietal portion of the common duct, setting up infective cholangitis, a pancreatitis is almost certain to occur.

The symptoms of pancreatic catarrh, passing on to interstitial pancreatitis, vary according to the cause; for instance, if it be due to gall stones, there will be a history of painful attacks in the right hypochondrium and epigastrium, associated with jaundice, and possibly accompanied by fever of an intermittent type often resembling ague. Tenderness at the epigastrium, with some fulness above the umbilicus, will usually be noticed; loss of flesh soon becomes marked, and if the pancreatic symptoms predominate, the pain will pass from the epigastrium round the left side or even to the renal and scapular regions. Fat and muscle fibres may be noticed in the motions as soon as the obstruction to Wirsung's duct is complete, and the pancreatic reaction will be found in the urine. If gall stones be not the cause, there may be merely an aching, or painful attacks not at all pronounced, or the symptoms may come on painlessly, associated with dyspepsia, and with slight jaundice soon becoming more marked. In such cases, if the swollen pancreas tightly embraces the common bile duct the gall bladder may dilate and give rise to a suspicion of cancer of the pancreas, which the rapid loss of flesh will tend to confirm. In the latter stages pale or white and bulky motions may be passed and a hemorrhagic tendency may be noticed. The liver is usually enlarged when the common bile duct is tightly gripped, and in several cases I have found cirrhosis of the liver, doubtless due to the long-continued stagnation of septic bile in the ducts. I have seen well-marked enlargement of the spleen on four occasions. In one patient the fever and the enlarged spleen gave rise to a suspicion of ague, the organisms of which were said to have been found in the blood, and on several occasions the repeated rigors have led to the diagnosis of malarial fever.

In 60 per cent. bile was present in the urine. In 40 per cent. calcium oxalate crystals were found. In 4 per cent. the oxalate crystals were associated with bile. In none of my cases was glycosuria found, though in two cases it developed several years later. Opie reports having found glycosuria in one out of twenty-two cases. Glycosuria only occurs as a very late symptom. Death may occur from asthenia, due to long-continued jaundice, or from some intercurrent disease, predisposed to by the loss of flesh and debility.

The symptoms of pancreatitis may be conveniently classified under (1) digestive symptoms, (2) physical signs, (3) metabolic symptoms, (4) symptoms artificially produced.

1. *Digestive Symptoms*: (a) Steatorrhœa or fatty stools, (b) azotorrhœa or faulty digestion of albuminous foods, (c) sialorrhœa, (d) diarrhœa, (e) dyspeptic disturbances, (f) emaciation, (g) nausea and vomiting.

2. *Physical Signs*: (a) Presence of swelling or tumor, (b) fever, (c) pain and tenderness with muscular resistance, (d) pressure on adjacent

organs, (e) hemorrhage, (f) jaundice, (g) fat necrosis (evident only when the abdomen is opened).

3. *Metabolic Symptoms* : (a) Glycosuria, (b) other urinary changes.

4. *Special Symptoms Obtained by Artificial Means* : (a) Alimentary glycosuria, (b) Sahli's symptom.

I am sorry that the time at my disposal will not allow me to dwell on these symptoms individually, but as I have recently done so in my Hunterian lectures, which can be seen in the *Lancet* for March 19th and 26th, and April 2nd, 1904, I need only now refer to them collectively. I would at once say that no single symptom alone will justify the diagnosis of pancreatic disease, but with such a number of symptoms and signs as those I have related, it is a mystery to me how the idea has gained so firm a hold that pancreatic diseases are, as a rule, undiagnosable. For instance, Opie only last year wrote: "Disease of the pancreas is rarely recognized during life," which is a reproach that I hope will in future have no justification. Although in any single case we may not have all the symptoms and signs that I have mentioned, yet in no case ought we to fail to find digestive or metabolic or physical signs if disease of the pancreas be present. Different diseases of the pancreas, it will be seen as one would expect, present very various grouping of symptoms, but in nearly every, if not in every, case since Dr. Cumbridge and I have been working together at the subject, we have found most valuable help from the urinary pancreatic reaction. Although we must not yet say this sign is absolutely pathognomonic, yet it is safe to make this assertion, that if the test be skillfully carried out it affords most valuable positive or negative evidence, when taken with other symptoms, in not only establishing the presence or absence of some disease of the pancreas, but in assisting in the differentiation of simple from malignant disease, a most important matter when surgical treatment is in question.

For the significance of the urinary test, and for the somewhat complicated and elaborate method of carrying it out, full details will be found in the Arris and Gale lecture, published in the *Lancet* for March 14th, 1904.

Treatment.—The treatment of catarrhal inflammation of the pancreas and of chronic interstitial pancreatitis will at first be by general and medical means aiming at the cause, whether that be gall stones, pancreatic calculi, duodenal catarrh, gastric ulcer, alcoholism or syphilis; but if after a fair trial of medical treatment not too long continued, the jaundice and loss of weight continue, and the signs of failure in pancreatic digestion and metabolism are manifesting themselves, the question of surgical treatment should be seriously considered, for the condition is one that if not relieved early will certainly lead to serious degeneration of the

gland or become dangerous to life in other ways. When operation is undertaken before the process has advanced to well-marked interstitial pancreatitis, my experience is that complete cure is effected in a very great proportion of cases, but if interstitial inflammation has become well-marked and has advanced either to the interacinar form or to cirrhosis, an arrest of the process is all that can be looked for. As proof of this statement, in some of my own cases, apparently well several years after operation, a pancreatic reaction can yet be obtained in the urine, while in two cases glycosuria has developed; thus showing that inflammation of the pancreas, if at all advanced, leaves abiding changes, and the sooner the morbid process is checked the less likelihood there will be of a permanently deficient metabolism.

Surgical treatment will vary according to the cause and the symptoms. Where there is evidence of obstruction, whether in the pancreatic or common bile ducts, the cause in the greater number of cases, twenty-seven as compared with twenty-four, will prove to be concretions which should, if possible, be removed, and, as proved by my experience in this class of cases, the hope of cure or of great relief is very promising.

Not only is it desirable to remove the cause of obstruction, but at the same time the bile ducts should be drained, either by means of cholecystotomy or cholecystenterostomy. Where no obstruction in the shape of gall stones or pancreatic calculi can be found, I would still advise drainage of the bile ducts by one of these operations. It has been argued that it is difficult to comprehend how drainage can do good in these cases; for proof of its efficiency I would appeal to the list of examples that I have given and to the after history of the cases which I have operated upon. The drainage of the bile ducts acts, not only by removing one source of irritation in the shape of infected bile, but at the same time it relieves tension and allows the infected pancreatic secretion to escape, besides also freeing the blood from a poison which seriously damages it and the system at large. Besides the beneficial effects of drainage, in many of the cases the cause of obstruction is also removed. Whether advanced chronic interstitial pancreatitis will be completely cured by operation, it is difficult to say, for in some of the severer cases a pancreatic reaction is found long after operation and after all other symptoms have cleared up, but in several cases that have been tested years after operation, the pancreatic reaction has entirely disappeared, thus apparently proving that the case is cured. Moreover, I suspect that the operation arrests the process of disorganization, even if it cannot alter the changes that have already occurred. Doubtless, in some the disease was a catarrhal inflammation of the pancreas, which was arrested either before interstitial inflammation had actually developed or before it had advanced too far,

and probably in none of the cases had the interstitial change advanced so far as to become interacinar or to present the advanced stage of atrophy or cirrhosis, as in none of the cases was sugar present in the urine at the time of operation, though the metabolic functions of the pancreas were impaired, as shown by the presence of the pancreatic reaction, and the digestive functions were affected, as shown by the condition of the feces.

Whenever the pancreas is involved, either in catarrh or in chronic inflammation, the surgeon must be prepared to do a thorough operation for exposure of the whole length of the common duct, as well as the head of the pancreas. I trust that I shall be pardoned if I give in detail the operation which I have been accustomed to perform, and which I have found both convenient and efficient.

Details of Operation.—I have been able to modify the operation for exploring the head of the pancreas and the common bile duct in such a way that what was formerly a most difficult procedure, involved prolonged manipulation, special appliances and at least two assistants, is now a comparatively simple operation, in the greater number of cases only requiring the help of one assistant and not requiring the use of any special apparatus. By this method the time involved in the operation is reduced considerably, and where adhesions do not give unusual trouble it is easy to complete the work in from thirty to forty minutes, which not only means a saving of time and fatigue to the operator, but a considerable saving of shock to the patient. I always employ a firm sandbag under the back opposite to the liver, which not only pushes the spine, and with it the pancreas and common duct, forward, but acts like the Trendelenburg position in pelvic surgery, by letting the viscera fall away from the field of operation. I then make a vertical incision over the middle of the right rectus, the fibres of which are separated by the finger, which I find to be most expeditious and the most effective method of exposing the gall bladder and bile ducts, but when it is necessary to open either the common duct or the deeper part of the cystic duct, instead of prolonging the incision downwards, as was formerly done, I now carry it upwards in the interval between the ensiform cartilage and the right costal margin as high as possible, thus exposing the upper portion of the liver very freely. It will now be found that by lifting the lower border of the liver in bulk (if needful, first drawing the organ downwards from under cover of the ribs) the whole of the gall bladder and the cystic and common ducts are brought close to the surface, and as the gall bladder is usually strong enough to bear traction, the assistant can take hold of it by fingers or forceps and by gentle traction can keep the parts well exposed, at the same time that, by means of his left hand, with a flat sponge under it, he retracts the left side of the wound and the viscera, which would otherwise fall over

the common duct and impede the view. It will now be observed that instead of the gall bladder and cystic duct making a considerable angle with the common duct, an almost straight passage is found from the opening in the gall bladder to the entrance of the bile duct into the duodenum, and if adhesions have been thoroughly separated, as they should always be, the surgeon has immediately under his eye the whole length of the ducts, with the head of the pancreas and the duodenum. So complete is the exposure that, if needful, the peritoneum can be incised and the common duct separated from the structures in the free border of the lesser omentum, but this is not necessary except where a growth has to be excised. The surgeon, whose hands are both free, can now with his left finger and thumb so manipulate the common duct as to render prominent any concretions which can be cut down on directly, the edges of the opening in the duct being caught by pressure forceps. The assistant can now take hold of the forceps with his left hand, as that instrument, with the sponge, will form a sufficient retractor, since the duct is so near the surface. When the duct is incised there is usually a free flow of bile, which it must be remembered is infective, but a sponge in the kidney pouch and the rapid mopping up of bile as it flows by means of sterilized gauze pads, avoid any soiling of the surrounding parts, and if thought necessary the bulk of the infected bile can be drawn off by the aspirator either from the gall bladder or from the common duct above the obstruction before the incision into the duct is made. After removing all obvious concretions, the fingers are passed behind the duodenum and along the course of the hepatic ducts to feel if other gall stones are hidden there, and a gall stone scoop, the only special instrument that I use, is passed up into the primary division of the hepatic duct in the liver and quite down to the duodenal orifice of the common bile duct, and to ensure the opening into the duodenum being patent, a long probe is passed into the bowel. The incision into the bile duct is now closed by an ordinary curved round needle held in the fingers without any needle holder, a continuous catgut suture being used for the margins of the duct proper, and a continuous fine green catgut or spun celluloid thread being employed to close the peritoneal edges of the gut. In such cases where the pancreas is indurated and swollen from chronic pancreatitis, and is likely to exert pressure on the common duct for a time, I insert a drainage tube directly into the duct and close the opening around it by a purse-string suture, the tube being fixed into the opening by a catgut stitch which will hold for about a week, but where this is not done I usually fix a drainage tube into the fundus of the gall bladder in the same way, as this drains away all infected bile and avoids pressure on the newly sutured opening in the duct.

So easy is it to remove impacted stones after this method of exposure, that I now never spend a long time in manipulating stones impacted either in the cystic or common duct, but at once incise the duct, remove the concretions, and close the opening without damaging the duct by prolonged manipulation. Although there is seldom any fear of leakage or of infection, yet owing to the separation of extensive adhesions there is usually some tendency to pouring out of fluid in the first twenty-four hours. I therefore generally insert a gauze drain through a split drainage tube, bringing it out by the side of the gall-bladder drain. The wound is closed in the usual way by continuous catgut sutures, first to the peritoneum and deep rectus sheath, next to the anterior rectus sheath, and lastly to the skin. Even in acute or subacute, as well as in chronic pancreatitis, this method is advantageous, as at the same time that the pancreas is exposed the bile ducts can be explored, and if the cause be gall stones they can be removed. Should it be necessary to expose the under surfaces of the pancreas an extension of the incision downwards gives enough room to raise the transverse colon and to get directly at the body of the pancreas through the transverse meso-colon.

To those having little experience in this operation the modifications which I have employed may seem trivial, but to those who have experienced the difficulties of the ordinary operation I feel sure that the method which I have described, which enables the pancreas and the whole of the bile passages to be dealt with close to the surface, will be sufficiently appreciated. But the technique of the operation is not the only important part of the treatment of these serious cases, which require thought and care, not only before and at the time of, but subsequently to, operation.

A careful study of the causes of mortality in operations on the common duct, associated with jaundice and pancreatitis, shows that the hemorrhage, either immediate, consecutive or secondary, cannot be ignored as a danger, and that shock, apart from hemorrhage, has next to claim our attention. Sepsis is no longer the bugbear that it used to be, thanks to a rigid all-round asepsis the employment of gauze drainage, and the careful avoidance of soiling the wound by infected bile. Although there is a greater tendency to bleeding in chronic jaundice from pancreatic disease than when jaundice is due to gall-stone obstruction, I think there can be no doubt that in all cholemic conditions the blood becomes so altered that the coagulability becomes seriously diminished, and that these features demand serious attention before any operation is undertaken in cases of common duct cholelithiasis.

I now always employ chloride of calcium in the case of jaundiced patients, both before operation in thirty grain doses by the mouth, and aft-

erwards in sixty grain doses by the rectum, twice or thrice daily for several days.

I think it is important to ligature all bleeding points and not to trust simply to forcipressure, and while in non-jaundiced patients adhesions may be simply separated, in these cases I prefer to divide adhesions between ligatures where practicable. Where there is persistent oozing of blood from innumerable points, a tampon of sterilized gauze forms a useful means of hemostasis, and this may be made more efficient by employing at the same time a solution of suprarenal extract to the bleeding surfaces.

The best treatment of shock is preventive, and to that end it is desirable to lose as little blood as possible, though I do not agree with those who assert that shock in operation is always dependent on loss of blood.

The patient is enveloped in a roughly-made suit of gamgee tissue, and where he is very feeble, or the operation is likely to be prolonged, it is performed on a heated table. A large enema of normal saline solution, with or without stimulant, given from fifteen to twenty minutes before, and the administration of from five to ten minims of solution of strychnia subcutaneously just before commencing anesthesia, are useful. Expedition in operating is an important factor in lessening shock, especially in abdominal surgery, for it stands to reason that prolonged manipulation and exposure of the viscera in patients so ill as are those composing the class of cases which we are now considering must generally be, will be badly borne, for it is not only the work of the surgeon but the deep anesthesia that adds to the shock, since for the operation to be well and expeditiously performed the muscles must be thoroughly relaxed.

After the operation, a pint of saline fluid with one ounce of brandy is given by enema, and five minims of solution of strychnia are given subcutaneously in two hours and repeated if desirable.

Subcutaneous injections of saline fluid or intravenous infusion are only rarely required.

Statistics.—In order to ascertain the after results of the operations, letters were recently addressed to the friends or medical attendants of all the patients who had not been recently heard of. In one case where the cause was due to pancreatic calculi, these were removed both from Wirsung's and Santorini's ducts with complete recovery, and the patient is now well. In twenty-seven cases of catarrhal or interstitial pancreatitis, where gall stones were found obstructing the pancreatic portion of the common duct, choledochotomy in nineteen, cholecystotomy in five, and cholecystenterostomy in three were followed not only by immediate recovery, but, as ascertained by recent reports, the patients are now well, except one who has since died from acute bronchitis; one who, twelve

months later, died from cirrhosis of the liver, and one who, eight and a half years subsequently to operation, is apparently well, though sugar has recently been found in the urine. In twenty-four cases where obstruction to the common bile duct was due to an inflammatory condition of the pancreas compressing the bile duct, though probably in many of the cases originally due to gall stones, yet where gall stones were not actually present at the time of operation, the bile ducts, and thus indirectly the pancreatic ducts, were drained, in twelve cases by simple cholecystotomy, and in nine by cholecystenterostomy; in three cases adhesions were separated and no drainage of bile ducts was performed. Of these twenty-four cases twenty-two recovered.

Two out of fifty-one patients died as a result of the operation: one, a cholecystotomy undertaken in a patient reduced to the last stage of exhaustion before a surgical opinion was sought and where at the necropsy a cirrhotic condition of the head of the pancreas was found, and a second, in which a cholecystenterostomy was undertaken in the presence of adhesions that appeared too formidable to deal with considering the poor condition of the patient, who succumbed a few hours later. In this case necropsy revealed a stone in the pancreatic portion of the common duct which would have been discovered had the patient's condition permitted a thorough exploration. From four, the letters were returned as "Gone; no address." The remaining sixteen completely recovered. Of three patients in whom the pancreas was found enlarged at operation, nothing beyond separation of adhesions and manipulation being done, all recovered. In one of these cases glycosuria has supervened and is still present, though the patient seems to be well. The after history of one cannot be traced. Of the third, word has been received to say that she is well fourteen years after operation.

Thus I have no hesitation in advocating operation in this class of cases after general and medical means have had a fair, but not too long, a trial, and the results I have given will, I think, justify my conclusions. A search through the literature of the subject has revealed the facts that (apart from my own cases, fifty-one in number, with two deaths, or a mortality of 3.9 per cent.) there have been sixty-two operations for chronic pancreatitis recorded, of which eight died, yielding a rate of mortality of 12.9 per cent. These cases have all been verified for me independently.

The subacute form of pancreatitis is more amenable to treatment than the acute, as the indications are so much more definite and there is more time for careful consideration. Though it has usually only been attacked when an abscess has formed, and is manifestly making its way to the surface, yet there is no reason why in some cases surgical treatment should not be adopted at an earlier stage. As in the acute condition, morphine

may be required to relieve the pain and lessen the collapse. Distension, if present, demands attention, and may have to be relieved by lavage of the stomach and turpentine enemata, or by the administration of calomel by the mouth. Calomel is also of benefit as an intestinal antiseptic, for which purpose it may be given in small, repeated doses, followed by a saline aperient. As soon as the constipation is relieved, diarrhoea is apt to supervene, when salol and bismuth, with small doses of opium, may be given. If surgical treatment is decided on, an incision through the upper part of the right rectus will not only be useful for exploring the bile passages and removing any concretions, but will also enable the operator to palpate the pancreas and to locate any incipient collection of pus, which, if practicable, should then be evacuated by a posterior incision in the left or right costo-vertebral angle. If the posterior incision be thought impracticable, the collection of pus may be removed by aspiration and the cavity opened and packed with gauze, which may be brought forwards through a large rubber tube, which procedure will, in the course of from twenty-four to forty-eight hours, establish a track isolated from the general peritoneal cavity. In abscess of the pancreas, which usually assumes the form of sub-acute pancreatitis, and which we must distinguish from the acute suppurative pancreatitis where the pus is diffused through the gland, or where the abscesses are small and multiple, the suppurating process is limited by a pouring out of lymph, so that should the patient survive the initial more acute stage, and discovery of the pus-containing cavity be made, the condition is one decidedly amenable to treatment by drainage. The anatomical relations will readily explain the course along which the pus burrows, should it burst through its lymph barriers—for instance, in one case I was able to evacuate an abscess from the right loin in a young man, aged twenty-four years, that had been mistaken for a perineal abscess, yet the kidney was quite healthy and the grumous pus had come from the pancreas and had passed behind the peritoneum, covering the second part of the duodenum. The patient recovered completely. In another case I opened the abscess in the left iliac region that had apparently started from the body of the pancreas and which had burrowed in the same way behind the peritoneum. The patient recovered from the operation, but developed trouble in the left side of the thorax and died suddenly several weeks later. In one case of acute suppurative pancreatitis the abscess was subphrenic, and was evacuated by an epigastric incision to the left of the mid-line; unfortunately the patient was too ill to bear a prolonged operation, otherwise I should have drained from the left loin, which might possibly have saved the patient. In another, where the symptoms were rather acute and the patient was extremely ill. I discovered pus between the liver and the

stomach, and, although drainage was apparently complete, the patient succumbed in a few days to exhaustion due to the septic process that had been initiated before the abscess was opened. In two other cases, the sequence of suppurative catarrh, I successfully drained abscesses of the pancreas through a tube in the common bile duct after removing the gall-stones which had obstructed Wirsung's duct. In one of these cases, the patient, a woman aged seventy-two years, remains quite well; and in the other, a man aged forty years, recovered from the operation, but three months afterwards died from exhaustion, and at the necropsy the empty abscess cavity was discovered in the head of the pancreas, the rest of the gland being affected with chronic interstitial inflammation. In one of my cases, in a man aged thirty-five years, pancreatic abscess burst into the stomach, setting up acute gastritis, the condition being proved by an exploratory operation. It was treated by gastro-enterostomy to drain away the foul stomach contents. The patient is now quite well, four years later. In another case, a young married woman aged twenty-six years, the abscess apparently burst into the bowel, and although recovery was tardy, she ultimately got quite well without operation. The diagnosis was made from the symptoms and by an examination of the swollen pancreas under an anesthetic, and subsequently by the presence of a pancreatic reaction in the urine. It is important in these cases to see that the cause is removed, if that be possible—for instance, gall stones or pancreatic calculi—so that if recovery occurs there may be nothing left to lead to a recurrence of the trouble.

It will thus be seen that I have had eight cases of abscess of the pancreas under my care, one of which was complicated by acute hemorrhagic pancreatitis. Six were operated on, with recovery in five, although in one of the cases the relief was only for a few weeks and in another for a few months. In the eighth case, which was not operated on, the abscess burst into the bowel and was discharged, the diagnosis having been made by an examination of the tumor under an anesthetic, by the presence of digestive symptoms, and by the discovery of the pancreatic reaction. When inflammation of the pancreas has ended in abscess, chronic interstitial pancreatitis will also probably be present, as was shown at the necropsy of one of my cases that died some months subsequently. It is possible that in some cases the interstitial change may be local, though in others it may be general, and may then lead to atrophy of the gland and to glycosuria. A search through literature reveals a considerable number of pyemic abscesses of the pancreas, but those resulting from sub-acute pancreatitis are not common. Besides my own seven operations for abscess of the pancreas, with two deaths, there have been seven others

recorded, with three deaths. Thus of fourteen cases, five died, giving a mortality of 36.6 per cent.

Treatment of Acute Pancreatitis.—The pain at the outset is so acute as to necessitate the administration of morphine, and the collapse will probably demand stimulants, which, on account of the associated vomiting, may have to be given by enema. In the early stages the symptoms may be so indefinite that the indications for surgical treatment are often not clear enough to warrant operation. But as soon as acute pancreatitis is proved, as it may be by the combination of symptoms, together with the urinary test, the surgeon must not wait until the collapse has passed off, as that may be dependent on septic absorption, which can only be relieved by operation. The stimulation of intestinal obstruction will probably lead to efforts to secure an evacuation of the bowels and relief to the distension. Just as in perforative or gangrenous appendicitis, an early evacuation of the septic matter is necessary to recovery, so in this equally lethal affection, an early exploration from the front, either through the right rectus, for reasons stated previously, or through the middle line above the umbilicus, or from behind, through the left costo-vertebral angle is indicated in order, if possible, to relieve tension, to evacuate septic material, to secure free drainage and to arrest the hemorrhage which leads to disintegration and necrosis of the pancreas. The after treatment will be chiefly directed to combating shock and keeping up the strength until the materies morbi, both local and general, can be thrown off. Even if no pus be found, no harm should accrue by such an exploration, which can be made in a few minutes through a very small incision in the middle line above the umbilicus, if necessary with the aid of cocaine. After establishing the diagnosis by the discovery of fat necrosis, a posterior incision in the left costo-vertebral angle will not only enable the diseased organ to be very freely examined, and if necessary drained for the evacuation of pus and gangrenous material, but will also secure free drainage of the lesser peritoneal sac. If, however, the inflammatory collection of the tensely distended and inflamed gland be incised from the front, as is advisable in certain cases, gauze packing and gauze drainage may usually be relied on to prevent general infection of the peritoneum. If there are signs of obstructed common duct the gall bladder should also be drained, and if gall stones are discovered they should be removed, if this can be done without seriously adding to the length of the operation or imperilling life by adding to the shock, otherwise they may be left and removed on a subsequent occasion if free drainage of the bile passages can be secured. I have had seven cases of acute pancreatitis under my care and have operated on five, three of which recovered. Of the two cases where operation was not consented to, and

where medical treatment alone was carried out, death occurred in the first case on the third day, and in the second case after a week's illness, attended in both with great pain and incessant vomiting.

I have already described a case of gangrenous pancreatitis in a man, aged fifty-eight years, in which I was able to open a collection of fluid through the great omentum above the hepatic flexure of the colon and to extract a slough of the pancreas, and at the same time to drain the gall bladder and remove all gall stones, recovery being ultimately complete.

In another case, in a middle-aged man run down by over work, but who was otherwise healthy, a sudden, severe epigastric pain was followed by high fever, rigors, epigastric swelling and obstruction of the common duct. Abdominal distension, chiefly of the upper part, and an ill-defined epigastric tumor pointed to the pancreas, and fat in the motions, with the pancreatic reaction in the urine confirmed the diagnosis of pancreatitis.

As there had been a previous history of gall stones, the question of common duct cholelithiasis as a cause was thought probable.

Exploration revealed a considerable tumefaction of the whole length of the pancreas, but especially of the head of the gland. Omental and visceral adhesions, together with the extreme illness of the patient, rendered a careful examination impossible, and as the gall bladder was acutely inflamed and distended, cholecystotomy was performed. Within the next twenty-four hours nearly two pints of muco-purulent material tinged with bile escaped. No gall stones were felt. The patient recovered and is now well.

In another case of a young married woman suffering from acute suppurative pancreatitis, the viscera were found hopelessly matted together. There was extensive fat necrosis all over the abdomen. I evacuated a subphrenic abscess containing masses of necrosed fat and dark, slate-colored pus. The patient was only temporarily relieved, and succumbed on the third day.

In this case I think I ought to have drained through the costo-spinal angle on the left side as well as from the front, but the patient was so ill that I feared to do more lest death should occur on the table.

In case of traumatic hemorrhage pancreatitis in a man, aged twenty-eight years, on whom I operated, drainage through the loin, as well as in front, was adopted, but did not save life, as at the time of operation peritonitis was already advanced.

In another case of a middle-aged medical man, the diffuse fat necrosis and adhesions of the viscera and omentum into a dense mass, presented a formidable obstacle to complete exploration, but as no evidence of any collection of fluid either in the pancreas or in the lesser peritoneal sac could be obtained, and as no gall stones could be felt either in the gall

bladder or bile ducts, I simply performed the peritoneal toilet and closed the abdomen, recovery following and ending in complete restoration to health. It is worthy of note that in this case the diagnosis was confirmed before operation by the urinary pancreatitis reaction.

A case was reported by Dr. Chas. D. Muspratt, of a woman, aged forty years, who had been admitted to the Royal Victoria Hospital, Bournemouth, on December 3rd, 1903, in a state of collapse, and suffering from severe abdominal pain, with incessant vomiting. The abdomen was opened within twenty-four hours of the onset of acute symptoms, and the omentum and intestines in the neighborhood of the pancreas were found deeply blood-stained with numerous spots of fat necrosis. The pancreas was almost purple, and extremely tense. An incision was made into the dark gland, and very free bleeding followed, which was arrested by ligature. Gauze drainage was employed, and complete recovery followed. This is apparently the first case in which direct incision of the pancreas has been adopted, and the operator is to be congratulated, not only on having the strength of his convictions in treating hemorrhagic pancreatitis on the lines of other phlegmonous inflammations, but on the success of such treatment.

In a case reported by von Mikulicz, in 1903, a patient under the care of Dr. C. B. Porter, of Boston, was operated on by a deep incision into the inflamed gland, with an excellent result. This is apparently the second case in which the pancreas was deliberately incised during acute inflammation, with a successful result. Woolsey (*Annals of Surgery*, November, 1903) gives a summary of three cases of this affection successfully dealt with by laparotomy and drainage. The first two cases were operated on in the early stage—the first on the third day, and the second twelve hours after the onset. The first case was a hemorrhagic one and showed fat necrosis, the second case showed no fat necrosis nor bloody fluid, but the latter appeared on the removal of the gauze drain two days after the operation. In the third case there was a marked but temporary glycosuria.

Dr. C. G. Kempe, of Salisbury, on December 11th, 1902, excised a portion of the head of the pancreas affected with acute hemorrhagic pancreatitis. It was done within two hours of the onset of hemorrhage. The patient, unfortunately, died from diarrhoea fifteen days later.

The argument that the mortality will be less if the surgeon waits for the formation of a local abscess is fallacious, as it takes no consideration of the large percentage of those who die before such a favorable result is presented, and in the second place many patients never develop a local abscess, the process being diffuse from the onset. The high mortality of an early operation in acute cases is due to the fact that in many of these

fatal instances intestinal obstruction was suspected, and the collapsed patients were subjected to a prolonged search for the seat of the supposed lesion. Of fifty-nine reported cases of operation during the acute stage, twenty-three recovered; these include my own cases and those just referred to. Although this is a large mortality, it must be borne in mind that the disease is a lethal one and usually ends in death if not treated surgically.

The lessons which one may learn from recorded cases are not to wait until the system is over-weighted with absorbed poison before operating, and not to spend too long a time over the operation.

In conclusion, if we were to base our opinions on the post-mortem records of the past, inflammatory affections of the pancreas would have to be considered among the rarest of diseases, but recent clinical observations and operative experience show that such conclusions would be far from accurate, and I think I have been able to demonstrate, both from my own and from the experience of others, that inflammatory affections of the pancreas or its ducts are very much more common than is generally supposed. Fortunately, in showing the frequency of pancreatitis, and the very serious nature of the acute, subacute and chronic varieties of the disease, I have been able to demonstrate that we can do very much for these patients by timely surgical intervention. But I want to convince my audience that if only we can have the assistance and support of our medical colleagues, nearly all the cases forming the subject of my address to-day (that is, pancreatitis due to gall stones) may be prevented by timely interference, and that with barely 1 per cent. of risk.

We know that gall stones may exist in the gall bladder without causing any trouble, and without giving notice of their presence, but as soon as they pass into the cystic duct, or as soon as they begin to produce catarrh, they fortunately give ample evidence of their presence.

Were the concretions removed in that stage there should be no mortality, and as can be proved both by my own personal experience in several hundreds of cases, and by the experience of other operators of large experience in this line of work, the operative treatment of cholelithiasis undertaken before the onset of deep jaundice and infection of the bile and pancreatic ducts, is, with due care and in skillful hands, almost devoid of danger.

Hence, in advising surgical treatment of gall stones at an early period, I am advocating a truly beneficent procedure which would prevent the occurrence of many of those truly serious cases of pancreatitis that cause danger to life.

THE PROGRESS OF MEDICAL SCIENCE.*

By SIR JAMES GRANT, M.D., K.O.M.G., Honorary President.

GENTLEMEN,—Permit me to congratulate you on the arrival of a new session of the Medico-Chirurgical Society, and to wish you a long continuance of the vigor of youth, and the enjoyment of a liberal share of public patronage, in the discharge of the duties and responsibilities of our noble profession. The history of our profession has been too little taught, and the absence of a thorough knowledge of the thorny path, in its advancement, may have led to the want of due reverence, to the work of the past.

How cheery and gratifying it must be to con over the labors of those who have built the very foundation of what is true and ennobling in our profession. How actually little we know of Hippocrates, Dioscorides, Aretaeus or Galen, who mastered many of the great problems of life, and left an imperishable reputation. True, we know more of Vesalius, Morgagni, Ambrose Paré, Boerhaave and Scarpa, who lived nearer our time and surroundings. Their life history is an object lesson and requires careful study and observation to gain even a moderate knowledge of their herculean labors for the good of humanity. The illustrious names of Harvey, Sydenham, John Hunter, Simpson, Lister, Laennec, Bright, Graves, Addison and many others, brighten, like the electric light, the paths of science, even at the present day. We must not discard the work of the old medical masters as effete and of little service in this 20th Century.

Samuel Johnson charmingly summed up his impressions, "If no use be made of the labors of the past ages, the world must remain always in the infancy of knowledge; if every man was to depend upon his own unassisted observation, every man would be marvellously ignorant, and the science of medicine stand still, or cease to be."

As Sir Dyce Duckworth has charmingly expressed, "the present condition of our profession at Home and throughout The Empire is better fitted to inspire hopefulness for the future, than has ever been the case." The investigation now in progress with reference to cancer, the study of malaria, due to Manson and Major Ross, the School of Tropical Medicine, enlarging our knowledge as to a clear conception of those grave diseases, which cut off by the hundred, our brethren in distant parts, the introduction recently of trained nurses into the New York schools, to observe closely the initial causes of disease,—such are fruitful lines of work, and according to a world renowned authority, Sir Joshua Reynolds,

*The opening address at the Session of the Medico-Chirurgical Society of Ottawa, October, 1904.

"those who were determined to excel, must do their work, whether willing or unwilling morning, noon, and night, and they will find it no play but on the contrary, very hard labour."

During the few months elapsed since the close of our last meeting, the scientific world has been truly active, and I will just advert briefly to a few subjects of deep and abiding interest to our profession.

Tuberculosis.—A national Association for the "Study and Prevention of Tuberculosis" was formed at Atlantic City, July, 1904, with Dr. Edward Trudeau, of Saranac Lake, as first President. The ovation given when Trudeau appeared on the platform, surpassed anything the large audience had ever been privileged to witness, which was a marked tribute not only to the pioneer of the Sanitarium Treatment in America, but as well to the widely known qualities of Trudeau, as a physician, scientist and humanitarian. This Association is thoroughly representative of the leaders of the medical profession, and there are evidences of a determination to make the Association of direct practical value, in legislation, in the education of the public, and in bringing about a co-ordination of philanthropic, medical and educational agencies, for the conquest of the great scourge. This Association will doubtless be a source of pride and gratification to physicians, and in fact, to all who take a sympathetic interest in the warfare against tuberculosis, and will prove a Supreme Council on all disputed points, as well as a scientific centre for encouragement in all good work in the line of Tuberculosis.

According to Dr. Knopf, the work of the past two years on this subject has far exceeded the work of the past five years. There are now in the United States 27 Associations for the prevention of Tuberculosis. He advocates in the strongest terms possible a plea for a Ministry of Public Health at Washington, D. C. to be in constant touch with all State and City Boards of Health, and with effective laws to combat Tuberculosis in man and beast, throughout the Union. To check this serious White Plague we require the combined action of a wise Government, well trained physicians, and an intelligent public. Such action accomplished would prove an object lesson to Canada.

The Neurones.—The neurone theory with its protoplasmic processes, or dendrones, and the single axis-cylinder process, with its cone of origin, its collaterals, or side branches, and its terminal arborisation, in fact, our nervous system consists of innumerable such anatomically independent nervous units in contiguity, but not in continuity.

Colic In The Erythema Group.—A recent discussion at Johns Hopkins Hospital on the surgical importance of the "Visceral Crisis in the erythema group" (*Bulletin, July & August*, p. 259), brought to light, some

mes transform starch into sugar, emulsify fats, convert albumins into peptones and crystalline bodies, and these functions are also carried out by the intestinal microbes, which in fact are the agents of the fermentations produced at the expense of the carbohydrates. In the normal state the system actually defends itself against the various poisons continuously formed in the alimentary canal. The intestinal epithelium is one line of defense; a second, the liver, which arrests and neutralizes the greater part of those which pass the first; the other eliminatory organs, kidneys, lungs and sweat glands carry off injurious materials. Among the other defense organs, the strongholds of a healthy system, are the thymus, thyroid and suprarenal bodies. Thus, at a glance we note a line of work by master minds in the vast subject of auto-intoxication of the intestinal canal.

The Huxley Lecture by Sir William MacEwen (Oct. 8th 1904) has brought to light exceedingly interesting and important facts, derived from a careful study of the Caecum, through defects in its walls as happened in the case of St. Martin's Stomach through the observations of Dr. Beaumont on the digestive process. According to MacEwen, caecal secretion is intermittent and regulated by reflex excitation in the introduction of food into the stomach, and becomes active just before the discharge of the contents of the ileum through the ileo-caecal valve. The caecal surface is studded with Lieberkühns follicles, and more numerous than in the small intestine, and the succus entericus from these glands plays an important part in the digestive process. The caecal secretion is under nervous control, reflex in character, and a like nervous mechanism extends to the ileo-caecal valve, regulating the discharge of the contents of the ileum. Pawlow favors the idea of an acid-reflex in the flow of food through the pylorus, which controls the pyloric orifice, and regulates the escape of the stomach contents too rapidly. It is supposed that a like reflex action regulates the ileco-caecal valve. Caecal movements begin in the appendix, being likely transmitted from the superimposed small bowel. The succus entericus from the glands of the appendix is of assistance in caecal digestion. In the final disintegration of food the appendix exercises a remarkable influence on the presence of those micro-organisms which in the large bowel also share in the digestive process a function of the appendix being to maintain cultures of these organisms in a fit state to act upon the caecal contents and control their multiplication.

Appendicitis and typhilitis are closely connected with derangement of function in these parts, followed by a stasis in the caecal contents, and, finally, a disturbance of the micro-organisinal fermentation, inducing structural change in the intestinal wall, a fruitful source of intestinal trouble.

The Great Omentum.—A very conspicuous object for size and fatness, its extremely atrophic condition being an exception, is the Great Omentum. According to Albrecht, who discussed this subject recently before the Gynæcological Society of Munich, the omentum was not meant to keep the stomach in its proper position. In fact, there is no clear evidence that fat is the essential part of the omentum, or that the omentum is a regulator of temperature for the benefit of the viscera, nor that the omentum is a form of ligament to keep the transverse colon in place. Albrecht considers that in pathological conditions the omentum serves three protective purposes, fills hernial sacks, (of doubtful advantage,) absorbs fluid effusions in the peritoneum, and by adhesions, limits inflammatory changes, and thus averts peritonitis.

International Congress of Physiology, Brussels, August, 1904.—A lively discussion took place on the Auto-regeneration of peripheral nerves which, according to Bethe of Strasburg, when permanently cut off from their trophic centre do not remain permanently degenerated, but, in fact, they are regenerated and become functional. According to Bethe it must be shown that these regenerated fibres are not connected with the central nervous system, either by physiological or anatomical evidence or both. Langly and Anderson are of the opinion that in nearly all cases after excision of a long piece of the sciatic or crural nerve, or after sewing the peripheral end into the skin, some connection was established between the peripheral end, and the central nervous system. The nerve fibres found in the peripheral stump of a divided and regenerated nerve grow out from the central nervous system. The reliability of the autogenetic theory is still of doubtful character.

Cerebellar Localization.—No localization of the cortex cerebelli has been satisfactorily established. The cerebellar motor elements are really not in the cortex but deeply in the organ itself. Pagano has come to the conclusion that there is a functional localization in the cerebellum.

The Leishman-Donovan Body.—The almost direct and rapid communication between the Dominion and India, through Canadian Pacific Railroad and Steamers, makes it almost a necessity to take a deep interest in "Tropical Diseases." The Leishman-Donovan Body is considered a new genus, belonging to the sporozoa, and supposed to represent a stage in the life history of a flagellate organism, closely resembling a trypanosoma. It is found chiefly in the spleen in cases of chronic fever, and the disease is termed "Cachexial Fever" usually with great enlargement of the spleen. The life history of this parasite outside the body, and how it enters the body, as problems, are still unsolved, the solution of which will clear the way, not only as to our knowledge of this systemic infection, of a septicaemic type, but also of the Leishman-Donovan Body,

which recently Leishman considered might represent a phase in the development of this flagellate.

I am truly glad to note the sound principle exemplified here this evening by young qualified medical men, associating themselves in as cordial a manner possible, with the older practitioners in this Ottawa District, by attending the meetings, joining the Society, and showing a desire to cultivate a spirit of unity, for the good of all concerned. In this City, there should be but one medical society, to strengthen and intensify the character of scientific work, and the idea of isolation, for the interest of the profession, and the public, should not exist in our midst. To one and all, it should be a source of pride and satisfaction to have in the Capital of Canada, the professional talent of which is of a high order, but one society, which would undoubtedly wield an influence for good, throughout the various scientific circles of the world.

In conclusion, let me state, Canada has good reason for hopefulness in her sons. This year is remarkable in that direction. The development of great muscular power, and accuracy of knowledge, as to co-ordinating movements, gained for Scholes the Cambridge Boat Race. The acuteness of observation, and skilled direction of Rifle Range precision, enabled Private Perry, to win gracefully "The King's Prize." Last, though not least, the highest position in Medical Science, Regius, Professor of Medicine, Oxford, the "*Gift of the King*," has been worthily accorded to Dr. Osler.

Such truly are undoubted evidence of the high position attained by our sons, in this First Colony of the Empire.

PRESIDENTIAL ADDRESS DELIVERED AT THE AMERICAN INTERNATIONAL CONGRESS ON TUBERCULOSIS AT THE WORLD'S FAIR, ST. LOUIS, OCT. 4, 1904.

By E. J. BARRICK, M.D., M.R.C.S. Eng., L.R.C.P. Lond. and Edin., Toronto.

NO one could but appreciate to the fullest extent the great honor of occupying the distinguished position of President of this International Congress on Tuberculosis. For this honor I am grateful to the noble band of men whose hearts have burned with love and sympathy for those who are or may become the unfortunate victims of the Great White Plague. To these men, not to me, is due the honor of bringing about this great Congress. To one man more than all others is due the honor, and to him this Western World owes a debt of gratitude which can never be adequately realized and never repaid. Nothing short of the strongest love and sympathy for suffering humanity could have impelled Mr. Clark

Bell to so unreservedly consecrate his great talents, his time and his indomitable energy to bring about this splendid result. No man with less ability, energy, tact and perseverance could have accomplished what he has in working out something practical towards stemming the tide of the spread of this the greatest enemy of the human race.

The object eminently uppermost in this movement has been, not to waste time over unsettled scientific questions and controversial methods of treatment, but to seize hold of, and turn to practical use settled scientific and clinical facts. To this end we have endeavored to set in motion a campaign of education by enlisting the services not only of the medical, legal and clerical professions, but statesmen—federal, state, provincial and municipal legislators,—business men, and in fact the whole people, so that some concerted and co-operative action may be taken to utilize the present knowledge on this great question. Thus our efforts have been to bring together at this Congress all the above, so that by discussion and interchange of thought something practical may be evolved and legislation promoted whereby it may be carried into effect.

The good work of organizing this Congress would not have been possible had it not been for the splendid sympathy of the United States Government, and its generous action in inviting the Governments of the various countries in the Western Hemisphere to extend like sympathy and to appoint delegates to the Congress. Such Government sympathy and action I understand is unprecedented in any part of the world. We also acknowledge our indebtedness to the World's Fair management for placing the Congress on its official list of Congresses, and in appointing a Committee on Organization to aid in carrying it out. The loyalty of our officers and delegates, and the praiseworthy work of the local committee in St. Louis have all largely contributed towards bringing about the happy results of this meeting. The practical advantages resulting from Congresses are sometimes marred by the contentions of scientists over debatable scientific questions. We all remember how the good that was hoped for from the British Congress in 1900 was marred by the statement made by Professor Koch regarding the relation of human and animal tuberculosis. Comparatively little seems to be remembered of that Congress save this episode. We are also familiar with the report of the Royal Commission, which was contrary to Professor Koch's statement. The world is rich to-day in settled scientific and clinical facts regarding this disease; the world is poor to-day in practical measures to carry these facts into practice, and bring the benefits within reach of those who are so sadly in need of help.

It was therefore determined by the Management that the supreme work of this Congress should be on lines of preventive medicine includ-

THE CANADA LANCET.

superising of families who spend their all in attempting to save their ones, and provide comforts for them during several years of a hope- ight with a chronic, and under existing conditions, fatal disease. I ire to say that there is scarcely a general practitioner before me to- or in this whole country, who, when he recalls his experience does eel that with a municipal sanatorium within easy reach of his pa- s, valuable lives might have been saved, and the spread of the disease her members of the family might have been prevented. A municipi- anitorium should be for the whole people, where every physician d have the right to treat his patients as freely as in their own homes, where the patients should be free to be treated by the physicians of own choice. Seeing then that such great advantages would flow a municipal sanatorium in each municipality, why have they not , established, and what are the difficulties in the way. I answer the y and indifference of the public generally, and the great loss led therewith. Difficulties have been well defined as things to be ome. How then may the difficulties in the way of municipal sana- be overcome? I answer, educate, educate, educate. A campaign ular education carried on by national congresses such as the Ameri- Congress on Tuberculosis, and the Canadian Association for the Pre- on of Tuberculosis, aided by the State and Provincial Associations, ed up by Municipal Anti-Consumptive Leagues similar to the ones in nto and Montreal, aided by the medical, legal, and lay press, the t and the platform, should be sufficient to arouse the public to a sense ; duty in this great work of saving and prolonging the lives of the le. When public opinion is thus educated it ought to be an easy er to secure aid from the Federal Government to assist each state 'ovince in establishing one experimental sanitorium that would be a rn and object lesson leading on to municipal sanatoria. It is pretty well established fact that the consumer pays the duty, as the revenue then is paid by the whole people, it does not seem un- nable that some of this should be expended in experimental sanato- s indicated, seeing that large sums are freely expended in experi- s in relation to tuberculosis among cattle, and in relation to agricul- dairying, etc. All that is necessary is that the public be educated , it. The first step being accomplished it ought not to be difficult to e state and provincial legislation similar to what was secured in On- in 1900, on conditions that the municipality aid in the work. In by-laws may be passed by the qualified electors, conditional on a cer- amount of help being secured from voluntary contributions. By this eration of the federal, state, provincial, municipal, and voluntary a municipal sanatorium might easily be established and maintained

in each municipality and brought within reach of consumptives in all conditions of life and in all stages of the disease, and thus not only save and prolong the lives of the people, lessen the amount of human misery, but also prove from an economic standpoint to be a good financial investment for all the parties concerned. It must be apparent to every thinking person that a municipal sanatorium in each county municipality would be an important local educator, and as the mind of the public become seized of its importance, patients would more readily be persuaded to take advantage of a local institution, where they would not necessarily have to pass out of the hands of their own physician and out of the reach of their friends, and where their chance of cure and improvement would be greatly increased, and the spread of the disease to their friends and the public generally would be materially checked. In conclusion, may I earnestly plead for municipal sanatoria on behalf of the 8,000 of our people who die each year in the Dominion of Canada, entailing an estimated annual financial loss of \$48,000,000. And on behalf of the over 100,000 citizens of this great Republic, who die annually of this same disease at an estimated financial loss of over \$600,000,000. Let the cry go up from the Atlantic to the Pacific, save the people, save this financial loss, and establish municipal sanatoria for Consumptives.

THE USE OF THE FINSSEN LIGHT AND X-RAY AT THE OLD LONDON HOSPITAL.*

By J. PRICE-BROWN, M.D.

This Hospital does not lie in a fashionable quarter of the great old city. It is far from Guy's, or Bartholomew's, or St. Thomas', or Charing Cross; and being situated in the very heart of Whitechapel, is not very frequently visited by medical men from this side of the sea. Nevertheless, it is the great metropolitan centre for the treatment of disease of every kind; and although few of the professional élite from afar may visit it, there is perhaps no place in London where more can be learned of disease in its manifold forms, where public philanthropy has been more lavish, or medical and surgical truth more scientifically investigated.

When, as a post-graduate, I attended London Hospital twenty years ago, it was considered one of the best centres for instruction in general medicine and surgery, offering a wide field of observation to the careful student. Beds almost innumerable and extern clinics large. It

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was a vivid example of what a general hospital was supposed to be. A huge, beneficent charity, where the poor alone could be treated, and to which they came daily in hundreds. And of all the hospitals that I have seen since then, the London still keeps the closest to its record. There the poor abound, poor in garb, crestfallen in feature, apologetic, almost servile in mien; but they offer a wide and interesting field to the eye of the clinical observer.

Although the poor in London are very poor, the rich are very generous; and this old Hospital has made even broader its phylacteries since the days that I first knew it. It has purchased wide areas of land, filled up its own square, and, having extended across the street, has erected in its new wing, large, well ventilated, well lighted wards, operating rooms and waiting rooms. These are for the accommodation of the great number of specialties into which medicine seems now to be divided. This wing is connected to the main building by subterranean passages, which rival in beauty and finish even the much talked of "Tuppenny Tube."

Of all the various sections represented in this vast division of the hospital, there is none more interesting than the one devoted to the use of the Finsen light. I must say, however, that I only stumbled upon it. After spending several hours one morning in the Laryngological section, in which there were over 150 extern patients, I was advised by Dr. Lake, the surgeon in charge, to visit the Finsen Light room before leaving, which I accordingly did.

But a word or two about the history of the light. Prof. Finsen, of Copenhagen, some ten years ago, while engaged in observations on the effect of light upon the skin, had his attention drawn to some old reprints on the favorable results of exclusion of light in the treatment of small-pox. This set him thinking; and he concluded that as the exposed parts of the body in this disease, were the parts usually pitted on recovery, there must be something in the theory; and that, probably, the chemical, or actinic rays of light, were the ones at fault. Basing his treatment on this idea, he prevented these rays from coming in contact with the skins of his small-pox patients, by having the light into their rooms filtered either through red glass or red curtains; with the result, that the usual pitting was almost entirely prevented.

Success in this line led to more thorough investigation as to the effect of light; and the teachings of Charcot, Widmark, Maklakoff, Bowles and others were fully sustained by the researches of Finsen in the same line. They proved that the pigmentation and inflammation of the cuticle, from the direct effects of the sun, were not due to the solar heat rays; but to the refrangible (the so-called chemical) the blue, violet and ultra-violet rays. Instances of this fact are the following: Irritation from

sunlight appears hours after exposure, while the effects of a burn manifest themselves immediately. Climbing glaciers when the sun is shining but the temperature below the freezing point, is often followed by erythema of the skin, arising from reflection of light from the ice fields—it cannot be from the heat of the sun. Strong electric light, such as that produced by electric welding of metals, is sometimes followed by inflammation of the skin of a character much more severe than is ever caused by sunlight alone, all due to the larger proportion of chemical rays which electric light contains.

Upon these data, Finsen devised another method of using light for therapeutic purposes; but it was in the opposite direction to the one of the red ray in the treatment of small-pox. Instead of excluding the chemical, or actinic rays, his object was to utilize them directly as curative agents. The data upon which he formulated his method were the following:—

(1) The power of the chemical rays of light to produce inflammation of the skin, *erythema solare*.

(2) The powers of the chemical rays of light to penetrate the skin.

(3) The bactericidal property of the chemical rays of light.

That the chemical rays of light can penetrate the skin, was adequately proved by Godneff. With a trocar he placed small sealed glass tubes containing muriate of silver under the skin of both dogs and cats. Then he allowed some of these animals to remain in the dark; while he exposed the rest of them to the direct sunlight. After an hour he took out the tubes; it being invariably found that the muriate of silver was blackened in the animals exposed to the sun, while the original color of the silver was retained in those kept in the dark, thus verifying the law.

Finsen went a step further. He placed a piece of sensitised paper on one side of a man's ear, letting the blue and violet rays of his apparatus for concentration fall on the other side of the ear. After five minutes trial the paper was unaffected. He next compressed the ear between two glass plates forcing the blood out into the surrounding tissues. Readjusting his apparatus as before, the sensitised paper was blackened in twenty seconds, demonstrating the important fact that these rays penetrate more easily tissues from which the blood has been expelled than those from which it has not. Hence the conclusion was arrived at that, in using the actinic rays for therapeutic purposes, it would be essential to render the area of skin to which they were applied as anemic as possible.

To prove that it was by the use of the chemical rays, that bacteria were quickly killed, Finsen performed many experiments. In the first series, in which ordinary sunlight was used, days and even months were required to kill the germs. In another series, in which plate cultures

were made with thin strata of nutritive material, bright sunlight would kill them in a few hours. While in a third, the blue, violet and ultra-violet rays being separated from the red and yellow by a strong electric light, similar germs placed in a thin stratum of agar were killed in a few seconds.

As a result of all these investigations, scientific as well as therapeutic, Finsen more than five years ago concluded to make a practical use of his discoveries, and forthwith established the first Light Hospital in the world. To this end he used a powerful arc light and confined his first efforts to the treatment of lupus.

The results were so successful, however, that within a year of its establishment at Copenhagen the system, with scarcely the slightest change, was inaugurated in London Hospital also.

The method is somewhat elaborate and I will not attempt to describe it minutely. The main feature is the transmission of actinic rays of light to the portion of skin which requires treatment. This is done in a direct line through long telescopic cylinders prepared for the purpose; and in London, as well as Copenhagen, the light used is of a 30,000 candle power.

The cylinders are four or five feet long. The lenses through which each light passes are four in number, and are made of quartz or rock-crystal, because they allow the ultra-violet rays of shortest wave to pass through in higher degree than is possible with glass. The two lenses near the distal end concentrate the parallel rays, and between these two lenses there is a tube of distilled water, which cools the light by absorbing the intensely heated ultra-red rays. To still further cool this end of the apparatus, a coil of cold water is kept constantly running around it.

Even yet, the light is too hot to be supplied to the skin without burning it, and to avoid such a result another apparatus is used. This consists of a plate of quartz and a convex lens of quartz, both framed in a conical brass ring, which contains two small tubes. Through these a constant stream of water is passed, rendering the skin so cool that it can stand the strongest light; while the attending nurse is pressing the convex side upon the skin, and by this means making it anemic.

The room in the London Hospital, in which the Finsen light is used, is well lighted, large and airy. It is kept scrupulously clean, and has arranged around its walls glass reservoirs of antiseptic solutions. There are also basins for purifying the hands and arms of the nurses who administer the treatment. Pigeon holes for the dressings and towels of the individual patients are also provided.

Electric arc lamps, two in number, each furnishing light through four telescope tubes, hang near each other in the long diameter of the

room. They were the gift of her Royal Highness, the Princess of Wales, now Queen of England. Near the corners of the room are four other lamps, each providing light through a shorter tube. There is then provision made to treat 12 patients at the one time.

In an adjoining building is a dynamo of 480 volts transformed to 55 volts, with a possible current of 50 to 55 amperes. This supplies the required light of 30,000 candle power.

Throughout the light room on each of my visits, there was perfect silence, while arranged in regular order were twelve recumbent figures. Each patient was presided over by his or her individual nurse, while gliding about the room was the lady superintendent. The patients were comfortably reclining on light, movable, iron couches, and each one seemingly remained motionless during treatment.

The nurses all wear washable overclothing, and work with sterilised, uncovered arms. They wear colored spectacles during attendance and sit on high stools beside their patients, each one constantly pressing the cooling lens on the spot to be treated. These lenses as well as the hands of the nurse are again sterilized before treating another patient. The regulation period of each treatment is one hour, repeated as a rule daily, each time upon a new spot; and the whole length of treatment may last into months or even years, according to the severity and persistency of the disease.

The patients are photographed before treatment is commenced; again while in the process of cure; and finally when it is accomplished, or the patient leaves the hospital for good. Records are also kept of the attendance of each patient, the number of treatments with notes, diagrams, etc.

The selection of the part of the diseased surface for treatment is by Unna's method, which consists in pressing on the reddened skin with a glass spatula until the part becomes anemic, revealing any yellow lupoid nodules that may be present. The skin is then cleansed with oil of sesame, and a little ring made around it of undine blue about half an inch in diameter. A piece of moistened lint with a corresponding hole in the centre is then placed over it; and the patient is ready for the pressure of the cooling lens by the nurse, and the transmission of the chemical rays.

Discomfort during treatment is rarely occasioned either by the pressure or the light; and after the hour's seance is over, the part is treated by a dressing of zinc carbonate in lanolin. In from six to twelve hours redness and swelling set in but without pain. This reaction is particularly marked in young people and in persons of fair skin. The dressings are of a soothing emollient character and are repeated as required. At the end of twenty-four hours reaction is fully developed. Bullae often

orm and there may be a good deal of serious discharge; but pustulation rarely occurs and necrosis never.

The plan of treatment usually followed is to attack the periphery bit by bit in a circle of rings, the diameter of each being about one third of an inch. The tubercle bacilli are destroyed by the chemical rays for the full depth of the lupus nodule; but the healthy skin is unaffected. The lupus redness persists for a time, but the contraction during healing goes on, leaving a flat, smooth, soft, cicatricial area, which in the end assumes the color of the natural skin. After the whole area has been treated, the surface is carefully examined, and the little nodules that have escaped treatment or that have reformed are again attacked.

Although there is never any fever, the local treatment is supplemented by such constitutional treatment as may be required. This is usually of a tonic and recuperative character.

The treatment, if judiciously and faithfully persisted in, is, in a large majority of cases eminently successful, the patients being both willing and anxious to await results. Yet the method is not without serious drawbacks, the chief ones being the amount of time consumed and the great cost of treatment. There is also the inability to treat very deep issues, and the impossibility of focussing the rays of light upon the curves of mucous membrane.

With regard to results of treatment, the one particular disease for which the Finsen light has proved itself to be useful is lupus vulgaris. In lupus erythematosus the effect has been marked, although much less certain than in ordinary lupus. In rodent ulcer it has also been tried extensively, and although some writers speak favorably of it, the general opinion is that the prospect from its use is uncertain. Rodent ulcer often spreads too rapidly to be controlled by slow action of actinic rays.

Even in lupus vulgaris there are certain conditions which render a case unsuitable for treatment, such as the existence of dense scar tissue, heavy pigmentation, great vascularity, great depth below the surface, any of which might prevent the proper transmission of light. Conversely to these, the specially favorable conditions are when the disease is limited to a small area, when it is superficial, and when it has not undergone surgical treatment.

The positive advantages of the light treatment are reliability, painlessness, excellent cosmetic results, less liability to relapse, and the avoidance of surgical measures.

Since the introduction of Finsen's method, various improvements have been suggested and tried, the main features being to shorten the time of each treatment, to increase the area of each operation, and to lessen the cost. In Lortet Genoud's lamp these objects are all claimed to

have been attained. In it while protecting from the heat rays, the chemical rays are obtained near their source and before dispersion. The surface of skin affected by the lamp in each sitting is $1\frac{1}{4}$ square inches or about 20 times the surface covered by the Finsen method, while the application only lasts fifteen minutes. There are also the Kjeldsen lamp, the Bang's lamp and others. The last named costing less, and being speedier in treatment than all the others. Each of these was reported well on to three years ago, yet the results can scarcely be what was expected of them, for in old London the Finsen light, as originally installed, still has its sway with its one hour seance, its telescope light, and its 30,000 candle power.

There were a number of interesting points that I noticed on the different occasions that I visited the light room. One was the fact that, then at least, nothing was being treated but lupus vulgaris. By a process of selection, after five years experience, this was the one disease to which the treatment seemed to be specially suited. The nurses all seemed well trained for their work under a thoroughly efficient and courteous lady superintendent. The patients, men and women, were from different stations in life. All seemed comfortable, free from restlessness, and free from pain. The 12 patients were under the charge of the 12 nurses. No questions were being asked. No conversation was indulged in. But a number of the patients, while lying at their ease under treatment, were reading books so arranged as not to produce fatigue. Several women were doing needle work, while a number of others one would imagine were sleeping, but for the occasional glances which they cast about the room.

On examining the lupoid patches, the effect of treatment in many instances was very marked. In some the nodules had entirely disappeared over a large area, leaving a soft though still highly coloured skin. The recently treated spots indicated varied conditions of soreness, while places treated first looked almost like normal cuticle. Of real scar tissue there was little to be seen.

The distance between the telescope tube and the little compressing cylinder, which the nurse applied to the surface, was about four inches; and the spot treated each time was about a third of an inch in diameter. These facts refer to the eight large Finsen tubes in the middle portion of the room; the four single ones, already mentioned, are, I believe, modifications of the original Finsen light, and were designed by Dr. Sequeira, the medical officer who has this department under his care. The cylinders in these are only half the length of the Finsen cylinder, and the area treated each time is said to be about an inch square.

The report was that all cases admitted for treatment were materially benefited, and the large majority of them cured. But as nodules might form again at any time if tubercle bacilli had been left undestroyed, patients were required to report themselves at regular intervals for year or two, until the physician felt sure that the cure was perfect.

Immediately adjacent to the Finsen light rooms in the London Hospital is the x-ray room. It is small in dimensions, and has three x-ray machines in regular operation, all of which are controlled by a single skilled expert.

The two methods of treatment appear to be supplemental to each other, being apparently under the one management. As instances of this, certain kinds of lupus are passed on from the Finsen light to the x-ray room. These are so-called pus cases, instances in which the Finsen light produces too great irritation, with a tendency to breaking down the tissues. Also cases in which the lupus penetrates deeply into the tissues. Others in which the mucous membrane of the mouth is seriously affected.

In all these the x-ray may do more than the Finsen light. In some, however, after the deeper and more massive nodules have been treated with the Roentgen rays, the patients are returned to the light room for further work to be completed.

In cancer the result from x-ray treatment were not very satisfactory; and, in malignant disease generally, it was not frequently used, except as adjunct to operative surgical treatment.

In rodent ulcer, however, the results were very good; and the three patients I saw under treatment were all suffering from that disease. The treatments were each of ten minutes duration, and repeated, when possible, daily. These cases were all instances of facial ulcer. One of them was situated on the side of the face and temple and had a diameter of three inches. The second was wider, situated on the cheek and extending to the pinna of the ear. The third over the lower cheek down to the margin of the lower maxilla. The surfaces of all were clean, and the physician stated that steady improvement was manifested in each case. When asked about the time required to produce healing, he was non-committal, stating that it might take six months or a year or longer; but that he had great faith in the treatment as it would undoubtedly produce marked improvement in each case, if not perfect cure.

One of the most striking facts in regard to the two methods of treatment, as I saw it in August last, was that the Finsen light was devoted exclusively to lupus, while in that division of the Hospital the x-ray was most exclusively devoted to the removal of rodent ulcer.

My own impression is that the Finsen light has come to stay. It may be improved and modified and cheapened; but the principle will remain, as a distinct factor in medical science. It contains great potency and it will only take time and experience to find its true limitations. The same might be said of the x-ray. Both are useful aids in the treatment of certain classes of chronic disease; and while, in the ardor of discovery, their range of usefulness may have been exaggerated, they will always without doubt, occupy valuable places in the therapeutics of medicine.

DISCUSSION ON DR PRICE BROWN'S PAPER.

Dr. Graham Chambers said that he was pleased that Dr. Price-Brown had formed such a high opinion of the Finsen light treatment of lupus. During last summer he also visited London and was so impressed by the results obtained by the Finsen treatment that he purchased a lamp from Copenhagen.

Dr. Chambers said that in order to understand the principle of the light treatment one should have in mind the various parts of the spectrum. The divisions towards the red end, etc., ultra-red, red, orange, are known as the heating rays; whereas those towards the opposite end, e. g., blue, violet, ultra-violet, are chemically active. The latter have greater germicidal action, but less penetrating power than the heating rays. Now the Finsen lamp is constructed so that the chemically active (actinic) divisions of the spectrum freed from the greater part of the heating rays are utilized. In the original lamp a solution of sulphate of copper and ammonium was used to filter out the red rays. This, however, was found to absorb ultra-violet as well as heating rays. In order to obviate this loss of germicidal potency, Finsen, in the lamps recently constructed, uses distilled water, kept cool by running cold water, as an absorbent of heat.

It was also found that glass absorbed considerable, but quartz very little, of the ultra-violet rays. In order to avoid this loss, the lenses in the newer lamps are made of rock crystal.

The disease in which the light treatment is most useful is lupus vulgaris, although it has proved of great value in erythematous lupus, capillary nævus and alopecia areata. The reason why in the East London Hospital lupus vulgaris is the only affection treated with the Finsen light is the fact that they have more than they can do in the treatment of the lupus cases alone.

With regard to my experience I have several cases of lupus vulgaris and of alopecia areata under treatment and have every reason to believe that the results will be excellent.

Dr. Charles R. Dickson said it afforded him much pleasure to hear a paper of this nature read before the Toronto Medical Society and listened to with such attention. It is but another proof that at last electricity is coming to its own, for phototherapy is but one of many therapeutic uses of electricity. He had the honor, a couple of weeks ago, to take part in an International Electrical Congress held in connection with the World's Fair at St. Louis, Mo., as a delegate from the American Electro-Therapeutic Association, and on that occasion presented a paper on the subject of phototherapy, a subject in which he had been very much interested for many years and so it was all the more pleasing to listen to the remarks of one who may practically be considered an "outsider" on the question, but who was undoubtedly most agreeably impressed by what he saw in London.

There are many circumstances which militate seriously against a wide spread use of the Finsen light. Chief among these is the initial cost of the genuine apparatus and the subsequent cost of operating it; next is the length of time consumed in each treatment, an hour or more; and the limited area which it is possible to treat at one time; another cause is the comparatively restricted field of usefulness of the Finsen light proper. Many ingenious substitutes have been devised but none of them up to the present time is capable of filling the place of the genuine Finsen lamp and many are comparatively useless, chiefly on account of the lack of penetration. All portions of the spectrum are bactericidal, differing only in degree. The farther we go up from the red end of the spectrum, the shorter and more rapid become the wave lengths of the rays and more powerfully bactericidal, but also the more refrangible and less penetrating; so that the ultra-violet rays while they are more rapidly bactericidal than those below them and thus very materially lessen the time of treatment, yet are largely absorbed by the epidermis and therefore cannot penetrate as deeply as those rays of greater wave length, and are, consequently, less effective in deep seated cases. The Finsen light proper takes in the blue, violet and the lower portion of the ultra violet rays; but the substitute lights give out very few of the blue and violet rays, while being very rich in ultra violet in some cases. Some of these forms of apparatus have a value of their own in other diseases than lupus, and even in extensive areas of lupus, not deep seated, are remarkably efficacious. Lupus recurring in cicatricial tissue, having undergone previous surgical treatment, is frequently very stubborn. In such cases the judicious use of the x-ray over such tissue, followed by the employment of the ultra violet rays, had achieved very happy results at his hands.

In a very aggravated case of acne vulgaris referred to him by Dr. Mac-Murphy, the entire face was involved, pustules were very plentiful, there

were several lumps on the cheeks and under the jaws, and the whole face had a swollen appearance and was deeply pigmented. Fourteen ultra violet rayings during a period of one month sufficed. No fresh pustules appeared during treatment.

In a case of folliculitis barbae (sycosis) of the chin with several spots the size of a ten cent piece, five ultra violet rayings effected a cure, and there was no trace of the trouble ten days after the first appearance of the lesion. The hairs were not epilated.

In carbuncle and furuncle two ultra violet rayings aborted the trouble. Many other uses of the ultra violet rays might be cited.

Some cases of lupus are more suited for x-ray, others for the Finsen light, others do better under a combined treatment, but as a paper of his which deals with this discrimination will shortly be published he did not touch upon that matter.

Rodent ulcer and epithelioma do better under the x-rays than under Finsen light treatment. With regard to the treatment of malignant diseases by the x-rays, the induction of artificial fluorescence of the tissues, previous to and during raying, offers fresh hopes and extends the usefulness of the x-ray.

He did not think that the day will ever come when a Finsen light will be considered a part of the equipment of every physician's office as the writer seemed to hope. Such treatment is much better left in the hands of those specially qualified to use it and none others should attempt it. It will always be a special form not a general form of therapy.

With the writer, he agreed that both the Finsen light and the x-ray are here to stay.

He congratulated all concerned in the presentation and reception of this interesting paper; for when he came to Toronto fifteen years ago and commenced to read a paper on a plea for the use of electricity in medicine about three-quarters of the audience got up and left the room, which led him to repeat his remark that at last electricity seemed to be coming to its own.

Dr. McMaster said as he did not hear the paper by Dr. Price Brown he was not in a position to discuss its merits. He wished to say something, however, about x-rays. His experience now reached back over about nine years working with x-rays and he was only beginning to know definitely in what field the rays were useful. He could almost say before hand in what cases it would be successful and in what ones a failure. Out of fifty seven patches of lupus treated by him, all had been successfully healed but two. One of these was scarcely a failure, as treatment was discontinued before the case was completely well. The patient had lost half the ear and had a large lupoid area beneath and around the ear.

Two months' treatment healed it all up, but a small spot behind the ear. This, no doubt would have cleared up if treatment had been continued. The other case was not a regular case of lupus, but was a tubercular infection of the fascia and sheaths of the muscles of the thigh, deeply situated in places. It was a complete failure in this case. In superficial skin cancers, situated about the eyelids, nose and face, he had met with nothing but success. The character of the tube and the technique used determined whether success or failure was to attend the case. Three cases of cancer of the lower lip had entirely recovered, the cosmetic effect being perfect. One of them returned twice in the old site and the other once. There was no doubt about their character, they were epitheliomata. No glands were affected in any of the cases, and they had not been irritated by any procedures for their removal. The hope for a cure in these cases is found in taking them early, and using a tube with a suitable vacuum at a proper distance. A case can be injured rather than improved by using faulty technique and unsuitable tubes. He had several failures of lip cases, but they were all in cases that had been operated on by the knife or had plasters applied, and the disease had extended to the adjacent glands or the tissues of the neck. Marked improvement had followed the use of the rays in several deeply seated carcinomata, but no cures had resulted. In all, the pain was greatly mitigated or relieved altogether, and in the case of breast cancer, where there was a profuse, foul smelling discharge, it was either completely removed or markedly lessened. The use of opiates could be almost completely discontinued. Nothing more than this was expected from the treatment, and even this could not be attained by any other known remedy. Almost all forms of chronic skin disease troubles are rapidly improved and cured by the rays, chief among which are chronic eczema, salt rheum, and acne vulgaris. The transformation in these cases by the rays is amazing and it is believed to be permanent. In these cases the character of the radiations and the method of their use are all important factors. As the doctor had no experience with Finsen light, he did not wish to discuss its merits, but one thing was certain that it would never replace x-rays. He was, however, convinced that there was a great field of usefulness for ultra violet, as well as other forms of light.

Dr. A. A. Macdonald said that cases which were operated on and then rayed did better than those operated upon. In malignant disease he thought that after operating much good would be derived from raying.

ARMSTRONG vs. BRUCE.

This was an action brought by Charles Armstrong, of Brampton, against Dr. H. A. Bruce, for burns received from a hot water bag while the latter was performing an operation upon him.

The facts of the case are briefly as follows: Dr. Bruce was called to Brampton by Dr. Lawson, on November 23, 1903, to see Mr. Armstrong who was suffering from acute Intestinal Obstruction.

Armstrong had been sick with the usual symptoms of obstruction for two days and Dr. Lawson had given purgatives and enemata without result. When Dr. Bruce saw him he had severe abdominal pain, distention, rigidity of the muscles, vomiting, a very weak pulse and a sub-normal temperature with hippocratic facies.

A room in Armstrong's house had been prepared that morning for the operation by a trained nurse, a graduate from Galt Hospital, engaged by Dr. Lawson, acting for Armstrong. Dr. Bruce took with him a Kelly pad, which can be filled with hot water instead of air and said to the nurse "this is an improvement on the old Kelly pad, as it can be filled with hot water as well as with air and serves to keep the patient warm during the operation, obviating the necessity for hot water bottles. Fill it just as you would an ordinary hot water bottle." The nurse took it and had it filled with boiling water and placed it under the patient. While this was going on, Dr. Bruce was washing and disinfecting his hands and placing his instruments, sutures, etc. The operation was proceeded with and the obstruction was found due to a buckle of bowel being strangulated in the internal abdominal ring and adherent there. This was separated with some difficulty and withdrawn, when a small portion of bowel—about the size of a five-cent piece, was found to be gangrenous. This was turned in and sewn over with Lambert sutures, so that it might be thrown off into the gut.

The patient made a nice recovery from the operation, but the next day he was found to have received superficial burns across the back and thighs. These were painful but not severe and were healed at the end of seven weeks when he was able to be up and about the house. Altogether he was confined to the house about ten weeks.

When Dr. Bruce's account was sent later, Armstrong declined to pay it, stating that he had been burned and put to extra expense with dressing, and therefore requesting that the account be reduced. Dr. Bruce replied that he was not in any way responsible for the burns and therefore could not on their account reduce the bill. As no payment was made at the end of six months, after several requests, Dr. Bruce sued him for \$100.00, amount of his account, and a week later Mr.

Armstrong issued a writ against Dr. Bruce for \$5,000.00. He claimed that the operation was unnecessary and that he had been burned through negligence.

The trial was held at Brampton on October 25th, before the Hon. Justice Meredith. Mr. William Mulock acted as solicitor for Dr. Bruce and Mr. Riddell as Counsel.

Expert evidence was given by Mr. I. H. Cameron, Drs. J. F. W. Ross, Geo. A. Bingham, John Caven, Wm. Hall and J. A. Lawson. Miss Faulkner, graduate of Toronto General Hospital; Miss Eastwood, superintendent of Victorian Order of Nurses; Miss Patton, superintendent of Grace Hospital; Miss Graves, head nurse at St. Michael's Hospital, and Miss Gray, superintendent of Home for Incurables, were present to give evidence on behalf of Dr. Bruce, but the judge, after hearing the medical evidence, did not think it necessary to call upon them.

The evidence for the defendant was to show that the preparation of the patient, placing him upon the operating table and the filling of hot water bottles, et cetera, came under the familiar knowledge of the nurse and her duty, and that the surgeon had nothing whatever to do with these details. It was clearly shown, even by the evidence of the nurse involved, that nurses receive during their training, instructions in the filling of hot water bags and that they know the proper temperature of water for this purpose and that a surgeon is justified in trusting them with the filling of these and is not required to examine these bags to assure himself that they are not too hot.

It was shown that after a surgeon is disinfected and prepared for the operation, it would be grossly wrong and a source of danger to the patient for the surgeon to feel hot water bags, which are unsterilized. That a surgeon must trust the nurse with the preparation of solutions, sponges, hot water bottles, et cetera, and that it is impossible for a surgeon to attend to these details. Any mistakes made in these preparations would be a danger to the patient and might result fatally. Operations are performed nowadays, with safety which were not possible a few years ago. This is owing to the development of antiseptic surgery and the efficient training of nurses and their help at an operation is absolutely necessary to the successful carrying out of the antiseptic details. The surgeon could not be expected to attend to these details and must necessarily trust his nurses.

The following judgment was delivered by The Hon. Justice R. M. Meredith:—

The plaintiff sustained a very painful injury, and one which has caused him some loss. These facts do not necessarily entitle him to relief

from the defendant. In order to have damages in this action he must satisfy the Court that the defendant has been guilty of some actionable negligence. The defendant is a skilled gentleman, a gentleman of the medical profession, and what would in an ordinary individual be but mere negligence would in his case, no doubt, be gross negligence. Had he done that which the nurse testifies he did, it would in my judgment, have been gross negligence. Whether I would be obliged to say that the injury which the plaintiff sustained was the natural effect of that negligence is another question and one which I need not determine. What I have now to find is whether the plaintiff has affirmatively shown that there was negligence on the part of the defendant occasioning the injury of which he complains.

I am unable to find upon the evidence that the nurse's statement is accurate. She is, I think, quite mistaken as to the direction proceeded from the defendant in regard to the filling of the pad. I am satisfied that she has confused that which he said in regard to sterilizing his instruments, with that which he said in regard to filling the pad. I see no manner of doubt that if the doctor had said to any experienced nurse that she was to fill that pad with boiling water it would at once have struck her as an extraordinary thing, and one calling for some explanation. Nothing of that sort took place. It was a thing that should not have been done by Dr. Bruce, unless through a slip of the tongue. He never meant that she should do that which she did. So that the probabilities are altogether against the story of the nurse. The direct testimony very greatly preponderates in favor of the defendant. We have Dr. Bruce's own statement, which is worthy of at least as much credence as that of the nurse. No doubt every one is naturally prejudiced in his own favor in a case of this kind, and Dr. Bruce's position in saving himself against a charge of negligence is to be to some extent affected by his interest. On the other hand, the nurse is saving herself from a charge of negligence, and probably an action for the recovery of damages. They stand upon an equal footing as far as that is concerned. Then there is the testimony of the other two medical gentlemen, who say that the nurse is mistaken. Upon the whole I find that the direction to fill the pad with boiling water was not given but the instruction was given to fill it as if it were a hot water bottle, and if that be so, the plaintiff's case seems to me to fall to the ground. I cannot find any negligence in Dr. Bruce having under the circumstances assumed that the nurse would perform her duties properly. I cannot say that upon this branch of the case anything like a case is made out for the plaintiff. It is not contended that liability arose by reason of any relationship of master and servant having existed between the defend-

ant and the nurse. The facts would not support any such contention. There was no such relationship.

The only question which causes me any trouble is as to the disposition of the costs. Under all the circumstances of the case, I think I am fairly exercising my discretion in making no order as to costs of the action.

The action will be dismissed without costs if the case go no further. If it go further, dismissed with costs, and there will be judgment for the defendant on the counter-claim with costs on the Division Court scale, without any set-off.

REFORM OF INEBRIATES.

The reformation of inebriates is the object of the new organization which will be known as the Inebriate Reform Society of Ontario, and of which a general committee met November 16th at Government House. His Honor, Lieut-Gov. William Mortimer Clark, presided.

The means to be taken by the association in carrying out its propaganda were outlined. It will advocate the adoption of the probation system, "home" or dispensary treatment in suitable cases, and the establishment of municipal sanatoria for indigent inebriates. It will also ask for legislation similar to the Imperial Inebriates Act of 1898. A general interest in the movement will be awakened by visits to municipalities, and the distribution of literature on the subject. In the meantime it will favor long sentences for confirmed habitual drunkards.

In these projects the co-operation of the Premier of Ontario and the Provincial Secretary will be asked. In addition, the Toronto Board of Control, the county judges, police magistrates, and the inspectors of prisons and charities will be requested to lend their aid.

A draft constitution was considered and a list of persons to form the Executive suggested. Both matters will be discussed at a general meeting of the society.

Among those present were: Dr. Harley Smith, who acted as secretary, Dr. Rosebrugh, Dr. Carveth, Dr. Bruce Smith, Dr. Oldright, Rev. Dr. Gilray, Mr. Edward Taylor, City Relief Officer, Mr. C. Ferrier, superintendent of the Victoria Industrial School, and Mr. Smith, superintendent of the Boys' Home.

Physicians desiring to contribute papers upon Internal Medicine, at the next meeting of the Pan-American Medical Congress, which meets at Panama January 2nd-6th, 1905, will kindly send titles at their earliest convenience to the Secretary of the Section on Medicine, Dr. Judson Daland, 317 South 18th Street, Philadelphia, Penn.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

A CASE OF MALIGNANT ENDOCARDITIS.

In the *Boston Medical and Surgical Journal*, Oct. 13th, Adams report a case of this disease which was diagnosed as typhoid fever, on account of temperature, pain in sides, enlargement of spleen, delirium and an erythematous eruption. By the sixth day, no rose spots appeared and Widal reaction was negative on the third, seventh and thirteenth days. On the sixteenth day a systolic murmur was discovered at the apex, lungs were normal and no heart symptoms. The temperature ranged from 99 to 105, with very considerable daily variations but without chills or sweats. By the twentieth day the murmur was a loud, burning sound, heard all over the heart area. The patient became rapidly worse, dying on the 25th day. The pulse throughout the attack was soft, full and regular, at the last very compressible, the rate varying from 80 to 100 till the 16th day, after which it was 120 or more, the respiration in the latter period being 30 to 50.

AUTOPSY.—Heart: The pericardium contains about one ounce of clear fluid; no adhesions. Size of heart $4\frac{1}{2}$ by $5\frac{1}{2}$ inches. Many petechial hemorrhages on anterior surface, particularly over right auricle and ventricle, just within the visceral serous covering. Heart fat fair in amount. Heart muscle flabby. Veins of heart distended with dark, liquid blood. On section, right auricle contains post-mortem clots and partly organized ante-mortem clots. The auricular appendage has organized clots (marantic). Right ventricle contains ante-mortem clots fully organized; probably marantic in origin. Tricuspid valves seem to be competent, but covered with a fibrinous exudate of recent origin, and valves are somewhat thickened. Papillary muscles and chordæ tendineæ practically normal. Left auricle negative. Left ventricle contains ante-mortem and post-mortem clots. Mitral valves are thickened and eroded and are covered with an ulcerative exudate forming excrescences of various sizes, some as large as a hazel nut, and in the exudate chordæ tendineæ thickened and imbedded in the inflammatory exudate. Heart muscle is pale and shows areas of brown atrophy, with areas of recent myocardial inflammation. Coronaries patent; no sclerosis. A few patches of beginning sclerosis in the aorta. Aortic and pulmonic semilunar valves normal." Other organs did not show distinctive lesions.

CONCLUSIONS FROM A SERIES OF MEASUREMENTS OF
BLOOD PRESSURE IN FEVERS, BEFORE, DURING AND AFTER
THE ADMINISTRATION OF STRYCHNIA.

1. The cases included in this study were all febrile. Among them were 31 cases of typhoid fever, 4 of pneumonia and 15 others with a variety of diagnoses.

2. In 32 cases the strychnia was given by mouth and in 18 subcutaneously. The total daily dose was usually $\frac{1}{2}$ gr., sometimes $\frac{1}{4}$ gr. Except in a few instances, the diet and position of the patient remained the same throughout the experiment.

3. The records were continued for days, and occasionally for weeks before and after the drug was given, in order that the regular range of variation in the blood pressure might be ascertained.

4. The measures were taken with Stanton's modification of the Riva-Rocci instrument. The maximum pressure was recorded as the height of the mercury column at the moment of the disappearance of the radial pulse, and the minimum as the trough of the wave of greatest oscillation of the column.

5. Measurements were taken at various intervals of time succeeding the administration of strychnia, from a few minutes to several hours. The observations extended over about eight months and included over 5,000 measurements.

6. The total result is negative. I have been unable to convince myself that strychnia exerts any influence upon the blood pressure of febrile cases when given in manner and dose above mentioned.

7. In the twenty-four hours following the administration of the drug there was a rise 5 mm. or more of pressure in 16 cases, a fall in 17 cases, and no change in 24. The average pressure in the 50 cases that received a daily dose of strychnia was no greater than in 18 cases without any drug.

8. To me one of the most striking features of the investigation was the fact that while strychnia and whiskey seemed to be entirely without influence upon the blood pressure, the sight of the dinner-tray or the prospect of getting up produced a most obvious, though transient, rise in the pressure. The only permanent gains in pressure occurred when the patient reached the crisis in pneumonia, or when convalescence enabled him to get up and walk.

9. As in the alcohol research of last year, I do not wish to be construed as saying that the drug under investigation is of no value. To prove so general a negative my work is altogether insufficient. My conclusion is, that in the dosage employed strychnia does not raise or in any way affect the maximum or minimum blood pressure so far as can be determined by the instrument employed.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S. Eng.

Chief Surgeon Canadian Pacific Railway (Ontario Division) — Surgeon Toronto Western Hospital.

THE TREATMENT OF DIFFUSE SUPPURATIVE PERITONITIS FOLLOWING APPENDICITIS.

In the *Columbia Medical Journal*, September, Dudley P. Allen strongly advocates the following method of treatment in diffuse suppurative peritonitis following Appendicitis:—

1. A lateral incision is made low down in the right iliac fossa. An opening in this situation gives direct access to the caecum, facilitates thorough washing of the peritoneal cavity and forms subsequent drainage.

2. With the patient turned on his right side the peritoneal cavity thoroughly irrigated with normal salt solution, or sterile water, by means of an irrigation apparatus having a funnel held high above the patient, and a large rubber tube leading from this to a nozzle twelve or fourteen inches long which can be carried to every part of the abdomen.

3. The operator's hand prevents the escape of intestines, and at the same time by keeping the incision open and the intestines back from the tube, allows of the free escape of the irrigation solution.

4. Shock, so frequently met with in returning to the abdomen, intestines which have escaped during the process of cleansing the abdominal cavity, should be avoided. Intestines distended by gas have great tendency to escape from the abdominal incision, especially if it is made in the middle line. With the incision in the right iliac region, and the patient turned on his right side, this tendency is much decreased.

5. When the washing has been thoroughly accomplished, two large glass drainage tubes are inserted into the plevis and one into the right flank, wicks being placed in these to aid drainage. Gauze is now tightly packed in the abdominal incision around the tubes. The patient returned to bed and kept turned well to his right side to facilitate drainage.

Gastric lavage may be employed to empty the alimentary tract and elicit peristalsis.

The writer believes that in cases of obstruction, independent of, or subsequent to laparotomy associated with great distention and a state of collapse, such as to preclude all hope of the successful removal of the obstruction by laparotomy, the quick formation of a faecal fistula may give relief and rescue the patient from impending death.

THE TECHNIQUE OF PROSTATECTOMY.

Ramon Guiteras, New York, advocates the following technique in the operation of prostatectomy:—

The patient is prepared in the usual manner, etherized, and placed upon his back upon the operating table. A lithotomy guide is then passed through the urethra into the bladder and the patient placed in the lithotomy position. An external perineal urethrotomy is then performed opening the membranous urethra. This opening should then be dilated to permit the introduction of a pair of curved scissors into the urethra until they have passed the apex of the gland, when a transverse incision is made in its floor.

When the lateral lobe is freed, the forceps are then placed upon it and it is delivered. The gland having been removed, it is well to palpate the region to see that everything is free. The bladder is then flushed out with hot water, followed by a second irrigation of 1 in 10,000 bichloride of mercury solution, and a perineal drainage tube inserted into the bladder. The tube remains in the same position as in the case of an ordinary external urethrotomy, and is removed at the end of a week, after which a large sized catheter is passed through the entire urethra into the bladder and allowed to remain until the urethra closes above it and the perineal opening has filled in.

THE SURGERY OF THE INTERNAL JUGULAR VEIN.

In the *Scottish Medical and Surgical Journal*, September, Jas. F. Nicoll advocates the ligature or excision of the internal jugular vein, as a preliminary to operative measures in connection with the mastoid. A considerable number of cases so treated have yielded results which appear to warrant the following conclusions:—

1. Preliminary legature of the jugular vein is, an operation of trivial risk, as the primary step in the operative treatment of the case if it is performed with clean hands and instruments. Ligature of the jugular, however, undertaken towards the end of a mastoidectomy when infective thrombosis has been discovered in the sinus or performed hurriedly after accidental wounding of the sinus, is an operation which performed with contaminated hands and instruments, carries grave risks of septic complications.

Excision of the jugular vein, on the other hand, in cases in which on exposure of the vessel it is found that though infective thrombosis has extended down the lumen constitutes an operation of some severity; the dissection extending in most cases from the clavicle to the mastoid. For this the operator must be prepared, even in cases in which the

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ons have given no indication beforehand of the condition of mat-
vealed by the incision.

Preliminary occlusion of the jugular vein in cases in which
is reason before operation on the mastoid to suspect infective
osis of the sinus constitutes the patient's main chance of re-
. To disturb the walls of a thrombosed sinus in exposing it, to
e it for evidence of thrombus, and finally to open it and break up
rulent thrombus in removing it with the spoon over a patent
r channel, sucking in debris with each inspiratory effort, cannot
arded as sound surgery.

Preliminary occlusion of the jugular vein, in cases (most often in
en) in which there is reason to suspect tubercular caries, permits
rformance of a much more radical mastoidectomy than can be
ed in cases where a patent jugular vein converts an accidental
l of the sinus from a comparatively trivial incident to an accident
g serious disadvantages and grave risks.

GYNAECOLOGY.

he charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital, Consulting
Surgeon Toronto Orthopedic Hospital.

SECONDARY ABDOMINAL OPERATIONS.

n the August 6th number of *St. Louis Medical Review*, Dr. Louis
Murtry writes on the above subject. As to what an abdominal sur-
s standard of attainments should be he quotes from Greig Smith as
s: "To be prepared at the appearance of any complication, to
the best known surgical technics; to do what is wanted, and no
than is wanted; to have the manner and method of each procedure
lly laid down in clear and definite lines; and generally to perform
peration in steady, straightforward, workmanlike manner through
idless complications that may arise, is no trifling call on the capac-
of a human being. Much of it may be learned by intelligent prac-
at the expense of the patients; much may be learned by careful
and practice on the dead body; but most of all will the young
on derive information from a close and intelligent personal attend-
at the operations of our great masters. Abdominal surgery is no
r a field for legitimate and versatile experiment; certain fixed and
l laws and customs have been laid down by the dearly bought ex-
ice of great men; the abdominal surgeon ought to begin fully equip-
vith such knowledge as has been gathered for him." The writer
our knowledge of intra-peritoneal diseases and their complications
dvanced wonderfully in these latter years, and our operative tech-
has been greatly improved, but with all our increased resources
andard set up by Mr. Smith in the words quoted, remains to invite

the best efforts of surgeons doing abdominal and pelvic surgery. endeavors to show that when we have disregarded this essential basis of operative work, and wandered away towards greater achievements by more devious methods, we have met with disappointment and have been compelled to retrace our steps. However methods may change, the standard of surgical efficiency must ever be the basis of successful work.

Dr. McMurtry says the necessity for a secondary operation, often avoidable in skilled hands, is to a certain extent a reproach to surgery and an annoyance, often an embarrassment, to the surgeon. This class of operations presents special and exceptional difficulties, and often, after the best efforts of skilled surgeons, terminate in disaster or failure. With the improvement in operative methods and skill, secondary operations have been diminished.

Referring to post-operative ventral hernia the writer says the most common cause is suppuration of the incision. Fifteen years ago ten per cent. of cases of abdominal section were within three years followed by hernia at the site of operation. With more thorough skill in disinfecting with improved suture material for buried sutures, with more care of operator's hands when exposed to septic material, with the use of sterilized rubber gloves by assistants and nurses, with more perfect hemostasis, with diminished insult to the tissues, and with greater care in adjusting sutures, suppuration of the abdominal incision has greatly diminished.

He also mentions the old-time glass drainage tube as a frequent cause of hernia. The substitution of the rubber covered gauze (when drainage is used at all) is a decided improvement. The old method of fixation of the pedicle in hysteromyomectomy at the lower angle of the parietal incision with the serre-noeud was a common cause of hernia.

In considering secondary suppurating foci, the doctor says they are usually the result of incomplete operations in inflammatory conditions where adhesions divide the suppurative area into multiple pockets; in suppurating cases wherein the drainage tract becomes obstructed by adhesions. Such complications are common after vaginal operations for suppurative salpingitis and peritonitis, often requiring secondary operation by abdominal section.

Regarding adhesions as a cause of secondary operations the writer says while these conditions were caused in great part by septic processes there can be no doubt that in a large proportion of cases the injury to the epithelium of the peritoneum from excessive washing and mopping was the cause of adhesions. Nothing has been done so much to lessen the frequency and extent of post-operative peritoneal adhesions as the more

practice of sequestering the general peritoneum by broad layers of gauze, and limiting all traumatism of operation and peritoneal toilet to the immediate pathologic area. Another important means of guarding against the formation of post-operative peritoneal adhesions is the liberal use of normal saline solution. Salt solution has a special application to the peritoneum, and one of the most positive is its power to so attenuate septic material as to enable the peritoneum to dispose of it without injury to its own surface. Foreign bodies, such as sponges, instruments, etc., left in the abdominal cavity and requiring secondary operation for their removal is much less common than formerly.

The essayist says in reference to vaginal section that since it is impossible to deal with the diseased structures by sight, and with appreciation of complications by vaginal incision, many secondary operations were necessitated. Vaginal incision and drainage of tubo-ovarian abscess is a valuable procedure in septic patients, but it is only in a limited proportion that complete cure is effected by this means. Secondary operation by abdominal section is required in the great majority of cases in order to obtain a radical cure. These facts are becoming generally recognized. This class of secondary operations is among the most difficult known to surgery.

In speaking of conservative surgery he says diseased ovaries were unclipped, or cauterized, or resected, and left in situ; infected tubes were loosened from adhesions, washed out with antiseptic solutions, and left in the abdomen with the expectation of restoration to normal structure and function. The application of this so-called principle of conservative surgery has necessitated more secondary operations than any other modern surgical innovation.

Dr. McMurtry, in concluding his paper, says that to operate on neuritic patients without demonstrable lesions, is a misapplication of surgery and should not be done even for the so-called moral effect, which at best is rarely more than a temporary impression.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal.

THE ULTIMATE RESULTS OF INDUCED LABOR FOR MINOR DEGREES OF PELVIC CONTRACTION.

Richard C. Morris, M. D., in *American Journal of Obstetrics*, Sept. 1904, reviews what might justly be termed the excessive popularity of cesarean section in the treatment of pelvic deformity at present. This paper calls attention to the value of the premature induction of labor and most timely.

The opinion of such a competent observer and operator as Dr. Mor-

ris, the physician in charge of the Preston Retreat at Philadelphia, merits the closest attention.

At the outset, he clearly expresses his opinion of the value of Cæsarean section in cases of pelvic deformity where absolute indication is present, namely, a true conjugate 7.5 c.m. or less in generally contracted pelves, or 7 c. m. in the flat pelvis. For the lesser degrees of contraction he holds that the induction of premature labor has its legitimate place, and must not be relegated to the obstetric garret in favor of the more brilliant Cæsarean section.

The results of Krönig and Zweifel, in 504 cases of labor in flattened pelves, observed in the Leipzig Clinic, shows that, with conjugates of between 9.5 and 7 c.m., intervention for contraction alone was required in less than 9 per cent of the cases. In 222 cases of generally contracted pelves, with conjugates of 10 to 7.5 c.m., assistance was required in but 9 per cent; 8.5 to 7.5 c.m., in 16 per cent; 9.5 to 8.5 c.m., no assistance was required. Thus, in 91 per cent. of these 726 cases, the labor was normal.

He quotes the Retreats record of 2,000 consecutive cases without Cæsarean section, and with but one craniotomy and that upon a dead infant.

The causes of failure in this operation are the interruption of pregnancy earlier than the degree of contraction demands, leading to loss of the child from excessive prematurity, or at a period too late, necessitating a difficult operative delivery with its attendant evils.

To avoid these errors, the widest experience, painstaking study and a keen mechanical sense are required.

Four factors are to be taken into consideration in these cases. The size of the pelvis can, as a rule be easily determined. The expulsive energy of the uterus can be estimated from the history of the previous labors in multiparæ, but this experience fails us in the case of primiparæ and must be left to the actual test of labor. The determination of the exact duration of pregnancy is the most important difficulty presented in these cases. Cessation of menstruation and the date of quickening, or better still, the date of conception, when known, permit of a fairly accurate prediction. The remaining factor, the size of the child's head, presents considerable difficulty in estimating. Instrumental mensuration cannot be depended upon. Pinard's table, founded on the measurement of a large number of fetal heads showing the biparietal diameters to be 8½ c. m. of the thirty-sixth week, 9 c. m. of the thirty-eighth, and 9 c. m. of the fortieth week, is a useful guide, when the duration of pregnancy is certainly known.

In the author's opinion Müller's manual engagement of the head by suprapubic pressure and a study of the relation of the head to the symphysis by vaginal and abdominal examination, is the most reliable method. He gives a table of thirty cases in which he has induced labor for moderate degrees of pelvic deformity. In these he induced labor usually two and not more than four weeks before the estimated full period of pregnancy, depending upon the degree of contraction and the estimated size of the head. When available, the history of previous labors in multiparæ and the record of the infant's size at previous labors were taken into consideration.

The most satisfactory method in the author's experience of inducing labor is as follows: the patient is given a few whiffs of chloroform if nervous, the anterior lip is seized with a double tenaculum and a hollow linen bougie with a stylet, having the curve of a prostatic catheter, is passed into the uterus along the anterior wall. As the bougie is inserted the stylet is gradually withdrawn. The bougie must be inserted at least half way to the fundus. If necessary, the cervix is then slightly dilated and a full sized Vorhees' bag is inserted into the uterus, being folded and caught in an appropriate forceps. This is then dilated and a weight attached to the stem by means of a cord, so as to exert a continuous traction upon it.

By this means he has never failed to obtain sufficient dilatation to permit delivery in from $6\frac{1}{2}$ to 53 hours, the average time being $29\frac{1}{2}$ hours.

He recommends the Tendelenburg-Walcher posture, leaving the case for a reasonable time to test the patient's own expulsive efforts before assistance is rendered.

In the thirty cases tabulated in the paper, there was neither maternal mortality nor morbidity. Twenty-three of the infants are living and well at the present time. Seven infants died, two were still-born and one from craniotomy after version, the occiput rotating backward with the chin and impacted above the pubis. This case was delivered during his absence on vacation by an assistant. The other still-born infant was the result of a prolapsed cord which was pulseless when discovered.

Two infants died from prematurity, the result of too early interruption of the pregnancy. In one of these, a false history of the pregnancy was given with purpose, and in the second a very fat abdominal wall interfered with estimating accurately the size of the child's head.

In concluding his paper the author asks if Cæsarean section could have given better results as regards maternal and fetal mortality and morbidity. Ten per cent primary fetal mortality and seventy-seven per cent of the children living to-day from two to ten years of age is an excellent record.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING EYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

SHOULD DEAF PEOPLE MARRY?

Dr. H. M. Hatward discusses this question in the *Medical Times*, of New York, Nov. 1904. Some years ago Professor Fay, of Gallaudet College, published an exhaustive work on the subject of the marriage of deaf persons, as his part of the work of the eleventh census of the United States. The term "deaf" in its widest application includes all degrees of imperfection of hearing. Von Trolle cares that every third person, between twenty and fifty years of age, is more or less deaf in one ear. There is reason to believe that slight imperfection of hearing is scarcely less important, in connection with heredity, than total deafness. Fay began his work in 1889, and the inquiry has continued uninterruptedly ever since. A blank form is circulated which is too lengthy to reproduce here. Several thousand have been returned, with the questions more or less completely answered.

The number of marriages of which the results with regard to offspring have been reported, one or both parents at the time of marriage being deaf, is 3,497. Of these 419 were very recent, consequently no offspring could be expected of them. There were therefore 3,078 marriages of more than a year's standing. The total number of children born of these marriages is 6,782. The proportion of sterile marriages was large, 14.1 per cent. Marriages of the deaf are more common in America than in Europe. This is probably due to the fewer restrictions on marriage in America, and the more prosperous general condition of the deaf. The majority of the married deaf have married deaf rather than hearing partners; the proportion in which both parents were deaf being 72, 5 per cent.

The chief cause that leads deaf people to marry each other is the deep feeling of fellowship and sympathy which has its roots in the similarity of condition of all deaf people. Marriages in which both partners were deaf are somewhat less productive than those in which one was a hearing person. Between marriages of the congenitally deaf and those adventitiously deaf there is not much difference in productiveness. Marriages of deaf persons from whatever cause (one or both partners being deaf) are far more liable to result in deaf offspring than ordinary marriages. Contrawise, the marriages of the deaf are liable to produce more hearing than deaf offspring, the proportion of hearing children being 75 per cent. This is in accordance with the law of heredity that a physical anomaly existing in a parent tends to be transmitted to the offspring and, on the other hand, with the law of heredity that the offspring tends to revert to a normal type. It is found that in marriages where both the part-

ners are deaf the proportion of deaf offspring is not increased. In the majority of cases no intensification of the liability to deaf offspring seems to be caused by the union of two deaf persons. Where the pathological condition of the two partners is the same, as is probable in the majority of consanguineous marriages of deaf persons, there is doubtless an intensification of the liability to deaf offspring, but happily such marriages are rare? It may be stated with certainty that congenitally deaf persons, no matter to whom married are far more liable to have deaf offspring than are adventitiously deaf persons. Deaf persons having deaf relatives however they are married, and hearing persons having deaf relatives, and married to deaf partners, and very liable to have deaf offspring. Where neither of the partners, being themselves deaf, have any deaf relatives, the liability to deaf offspring is slight, perhaps not much more than ordinary marriages. The possession of deaf relatives seems to be a trustworthy indication of a liability to deaf offspring.

The marriages of the deaf most liable to result in deaf offspring are those in which the partners are related by consanguinity. The statistics indicate that *it is exceedingly dangerous for a deaf person to marry any blood relative, no matter what the character or degree of the relationship may be, and no matter whether the relative is deaf or hearing, nor whether the deafness of either or both or neither have other deaf relatives.* Consanguineous marriages among the deaf should be prohibited.

THE SURGICAL TREATMENT OF BRIGHT'S DISEASE FROM OPHTHALMIC STANDPOINT.

George F. Suker, Chicago, *New York and Philadelphia Medical Journal*, June 4, 1904.

The cases which form the basis for the conclusions arrived at in this paper belong to that variety of Bright's disease which presents certain characteristic lesions of the eye fundus. The writer refers to statistics which show that fully 20 to 30 per cent. of all cases of Bright's disease develop eye lesions during some stage of the disease, and that the tenure of life, under the very best medical care, is about two years after the recognition of this complication. About 75 per cent die during the first year, at least 85 per cent. of the remainder during the second year, scarcely any surviving for three or four years.

Suker has collected all the cases of chronic Bright's disease operated on by decapsulation of the kidney, in which there were definite and distinctive eye changes. He found 17 which belonged to this category. In all these, death resulted earlier than the average time under the best medical and hygienic treatment, the mortality being 100 per cent. These cases prove the utter failure and uselessness of the operation.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

THE TREATMENT OF LARYNGEAL TUBERCULOSIS WITH FORMALIN.

Lockard *Laryngoscope*, Oct. 1904, in a paper dealing with the medical treatment of laryngeal tuberculosis, points out the general superiority of formalin applied topically to the larynx. He does not think it superior in all cases, but may have to be used with, or followed by lactic acid.

For the following reasons he considers formalin the most satisfactory remedy:—

1. It surpasses all other bactericides in solutions of a strength which can be tolerated.
2. In tubercular ulcers it is fully the equal of, and probably superior to, lactic acid.
3. Its effect upon vegetations is prompt and pronounced.
4. In infiltrated cases it is by far the most satisfactory remedy.
5. It possesses some anæsthetic properties.
6. It is the only remedy of the curative class that can with safety be placed in the patient's hand, thus maintaining a continuous cleansing, germicidal and stimulant action.
7. Its field of usefulness comprises all of the varied types of the disease.

THE ETIOLOGY AND DIAGNOSIS OF OZENA.

Theisen, *Laryngoscope*, October, 1904, in an interesting paper on this question, offers the following conclusions.

1. Sinus disease probably causes ozena in a certain percentage of cases, or at least, it must be considered a strong predisposing cause.
2. Suppurative processes in the accessory sinuses, as shown by Pearce's investigations, are frequently present in certain of the infectious diseases of childhood, particularly scarlet fever, measles and diphtheria, and, for this reason, these infectious diseases must be considered at least possible etiological factors of ozena.
3. That while a certain percentage of cases are caused by sinus disease, this is not sufficient to explain the pathogenesis of the whole clinical picture of ozena.
4. The large number of ozena patients having pulmonary tuberculosis, would certainly point to the nasal condition as a strong predisposing cause for the development of the tuberculosis condition.

NOTES ON NASAL SUPPURATION.

Mackie, *Journal Laryngology*, October 1904, in a very practical paper, dealing with purulent discharge in the nose, discusses these cases along the following points:—

1. The essential cause of suppuration is defective drainage.
2. Defective drainage is mainly due in childhood to adenoids and lymphoid hyperplasias.
3. Later it is the result of hypertrophies and deformities, resulting from lymphoid hyperplasias during the period of active growth and development.

4. Adopting this view of the rational history of nasal suppuration, the whole subject becomes more intelligible and a simpler and more rational treatment becomes possible.

In discussing the treatment, he believes in following the rules of general surgery, where thorough exposure and drainage of the whole diseased area are essential to good results. He believes tinkering surgery in sinus disease does more harm than good. If the physician has not complete confidence in his ability to handle the case completely, he should not begin.

This applies more particularly to the chronic cases, accompanied by marked structural changes. He endeavors to preserve as much tissue in the nose as is possible, even if there should remain a slight discharge. If danger from extending infection threatens, he proceeds to thoroughly remove all diseased tissues. In disease of the posterior ethmoidal cells, he operates boldly on the middle turbinal at the outset, when the middle turbinal remains red and turgid after the application of cocaine and adrenalin, and the patient complains of post-nasal discharge.

He has almost always found a diseased ethmoid. Disease of the sphenoidal sinus is considered the easiest to treat. He considers simple intra-nasal treatment is sufficient for the majority of frontal sinus cases. His experience with antrum suppuration leads him to think that the majority of cases are not due to dental causes, but to obstruction and infective disease in the neighborhood of the natural opening. He emphasizes the fact that the antrum trouble is very often kept up by other sinus disease.

X-RAY THERAPY AND SKIAGRAPHY.

Under the charge of JOHN McMASTER, B.A., M.D., C.M., Toronto.

AMERICAN ROENTGEN RAY SOCIETY.

The 5th annual meeting of the above society was held in St. Louis, Sep. 9, 10, 12 & 13. Over 150 active x-ray workers, from all parts of the States, are members of the society and attended the meeting. Dr. McMaster, of Toronto, was the only Canadian member present. There were 19 papers presented, five of which formed a Symposium in the action and use of x-rays in tuberculosis disease of the chest, joints, peritoneum, testicle, bones and glands. The testimony is becoming universal of the beneficial effects to be derived from this agent in all forms of tubercular disease, be it situated where it may. Statistics, while not always reliable, aid somewhat in forming opinions on the merits of any therapeutic agent. The table which is appended and which was compiled by the president of the society, from data obtained from its working members, shows in unmistakable language that the attention of the whole medical world is challenged to this question. The most skilful observers and workers in x-ray therapy contributed towards this compilation and its authenticity is above suspicion.

Tubercular Disease of	Number of cases treated.	Number cured.	Number improved.	Failures.
Long and flat bones.....	71	26 (33%)	25 (35%)	21 (29%)
Joints.....	141	54 (38%)	53 (37%)	34 (25%)
Tendon sheaths.....	19	19 (70%)	6 (22%)	2 (7½%)
Peritoneum.....	32	13 (40%)	8 (25%)	19 (35%)
Testicle.....	21	7 (33%)	10 (48%)	4 (19%)
Lymphatic glands.....	226	79 (35%)	92 (40%)	55 (25%)

The table refers only to such tubercular diseases as are usually treated by surgical means. The reports of the treatment of a large number of unmixed tubercular infection of the lungs were even more encouraging. Six papers were read on the treatment of the various forms of malignant disease. The character and quality of the radiance required for the different forms of cancer, as well as the details in technique necessary for success, were fully demonstrated. The discussion on this subject was exhaustive and probably the ablest ever heard on this subject at any medical meeting on this Continent. That definite progress has been

made in the treatment of cancer and sarcoma will no longer be doubted. The cases that are curable by x-rays are capable, in most cases, of being clinically diagnosed. From the reports given, it is evident that all cases of sarcoma ought to be rayed, for many of the apparently hopeless cases are curable by x-ray alone. The whole subject of sarcoma was investigated and a large number of cases reported. The technique used in these cases and the character of the x-radiance, determine whether success or failure is to result.

The following members either read papers or took part in the discussions: Leonard, of Philadelphia; Johnston, of Pittsburg; Burdick, of Chicago; Kossabian, of Philadelphia; Smith, of Chicago, Grubec, of Chicago; Scott, Kansas City; Boggs, of Pittsburg; Hulst, Grand Rapids; Hickey, Detroit; and others.

Radiography, with all that pertains to it—apparatus, technique, developers, etc., etc.—came in for a large share of attention. One cannot review this field of work, noting the many advantages conferred upon the profession by the use of x-rays from a diagnostic point of view, without being astonished that more medical men do not avail themselves of its manifold uses. It is perplexing to consider that the medical colleges of this country are taking such meagre steps to acquaint the young of the profession with a knowledge of one of the greatest diagnostic aids, as well as therapeutic agents of this century.

Papers on stethoscopic radiography and the interpretations of radiographs of the chest were given by Kassabian and Hickey. A better understanding of the shadows produced in chest work will result from these papers. Many mistakes have been made in the interpretation of radiographs of the chest and abdomen. The diagnosis of brain tumors and softening was dealt with in a paper by Pfahler, of Philadelphia.

That this society is doing a grand pioneering work along the lines noted above is evident. It is gratifying to know that the members of the society are taking every pains to do their work in a scientific manner, and to establish on a sound basis the diagnostic and therapeutic value of x-radiance.

The following case shows that in all obscure cases of pain in hand or foot, a radiograph should be taken. A lad had been in several hospitals in New York at different times and his complaint was diagnosed rheumatism, or some similar affection by all the physicians under whom he was placed. He was disabled for over two years and had sought relief from many. At last he came under the care of Dr. Carl Beck, who took a radiograph of the offending foot and found a broken needle embedded in the tissues about the ankle joint. Its removal entirely relieved the boy who had no knowledge of how it had got into the foot.

methods which were highly praised by their advocates. Drs. Lupthon Smith, Reddy and T. P. Shaw took part in the discussion.

Dr. J. A. Hutchison showed a boy eight years old upon whom the Lorenz method for reducing a congenital dislocation of the hip had been performed a year ago, when it was found that the head of the bone was very small and the acetabulum shallow. A very good result was obtained. Hutchison also showed a case of separation of the epiphysis of the femur due to direct violence, in a boy fourteen years old. An open incision was required to replace it, and it was maintained in position by a silver wire. At present, about a year after the accident, there is one inch of shortening, due, as the skiagraph shows, to want of perfect apposition of the epiphysis to the shaft. Dr. Chas. Martin read a most interesting and instructive paper on the value of urinary examination in nephritis, comparing the clinical with the post-mortem findings. The paper was based chiefly upon the cases which have been examined at the Royal Victoria Hospital during the past ten years, the statistics of which were collected by Dr. W. W. Francis. Dr. Martin pointed out the comparative frequency of normal urine findings in cases which showed post-mortem large areas of both kidneys involved by malignant growths. The frequent occurrence of casts without albumen and vice versa was alluded to, and in conclusion he stated that he agreed with Cabot when he said that after all the two most important things in the routine examination of urine were the quantity and the specific gravity. Drs. Hamilton, Armstrong, Shaw, and Lauterman, shared in the discussion. Dr. G. Mathewson reported a case of quinine amaurosis. The patient was confined on March 4th, 1904, and on March 6th developed symptoms of puerperal septicemia. Quinine sulphate was started on March 9th and kept up until March 26th, a total quantity of 150 grs. having been administered. On the fourteenth of March the patient became delirious, on the fifteenth blindness set in, on the sixteenth the temperature was subnormal. By the ophthalmoscope on March 26th the optic disc was seen to be pale, the fundus hazy with almost complete contraction of all the blood vessels. Treatment with nux vomica and amyl nitrite was instituted and by April 9th the patient could count fingers. On April 29th she could walk about the ward, and on May 11th color vision for blue returned, followed by vision for red and green. Evidently this was a case of idiosyncrasy for quinine as many people had taken a far larger quantity of the drug without ill effects.

The District of St. Francis Medical Association held its regular November meeting in Sherbrooke. Dr. Austin in the chair. Dr. Bachand read a concise yet complete paper upon the treatment of diseases of the frontal sinuses. The author stated the various operations and pro-

cedures advocated for the relief of this trouble, and then entered into particulars in regard to the details of the methods employed. He personally found that much could be done for the relief and cure by medical treatment by way of the natural passages, after removal, if necessary, of the superior turbinated bones. The paper which was well received was read in French, although the discussion which followed, lead by Dr. Farwell was conducted in English.

Dr. Farwell presented a case report of a patient who had suffered from mastoid disease. This patient was a child of eight years of age who for a long time had suffered from middle ear disease following scarlet fever, and when it came under the speaker's care the process had extended well into the mastoid region and the petrous portion of the temporal bone. There was also a discharging sinus in the scalp. Operation showed that the bone destruction had gone on to such an extent that eventually a sequestrum almost the size of a walnut had to be removed. This included the whole of the mastoid tubercle and a portion of the petrous bone containing the groove of the lateral sinns and the upper surface, about one inch in length. A skull marked to correspond to the bone removed was shown, and the unique specimen passed around for examination. During the discussion which followed Dr. Bachand showed a number of fine specimens demonstrating the different forms of operations practised in mastoid disease. Several cases of interest were reported by the members. Dr. King mentioned one in which a patient suffering from carcinoma of the pylvis and duodenum had lived for nine weeks upon nutritive enemata alone. Dr. Williams reported a case in which some seven weeks after a laparotomy wound had practically healed, there had developed a fecal fistula. Dr. Cameron reported another case of paresis and blindness following the taking of wood alcohol. The patient took several drinks and then feeling ill returned home when paresis, more particularly of the lower extremities supervened and this was followed by the gradual onset of blindness. Dr. Bachand who had followed up the case went on to say that all treatment was of little avail, as after a period of very slight improvement the condition recurred to one of total blindness. The fundus showed at first a choked disk followed by optic neuritis. In the discussion Dr. Austen drew the attention of the Society to Dr. Buller's work on the subject, and it was decided to follow the example of the Montreal Medical Society and petition the Government to put some check upon the supply of this article in its present unprotected form with no warning label. After the admission of four new members the meeting adjourned.

The annual report of the Montreal Health department for last year has been completed and contains many interesting details. The total

mortality for the period of twelve months has been 20.21 per 1000 or 4.56 less than the mean rate for the preceding 18 years. 3.04 per 1000 and 2.37 per 1000 less than in 1901 and 1902 respectively. Tuberculosis caused fewer deaths than in the years immediately preceding. Before 1900 the deaths numbered 692; 1901, 647; in 1902, 644; and in 1903 only 633. Two deaths were caused by smallpox or eight less than in 1902. In this connection the health officer shows that out of 90 cases of smallpox in the city not one person suffered from the disease who had been vaccinated during the past five years, and he stated that the civic officials who were going around the schools vaccinating, were now meeting with no opposition; whereas two years ago over a thousand scholars refused to attend school because they had to submit to vaccination. The following interesting table was appended to the report:

	90
Vaccinated since five years	0
Vaccinated some years ago.....	13
Unvaccinated.....	77
	<hr/> 90

Measles caused 77 deaths or 7 less than last year; 24 by scarlatina or 40 less than in 1902, 21 less than 1901 and 108 less than 1900. Diphtheria and diarrhoea cannot be compared with previous years on account of their having been classified according to the new international system. Typhoid fever caused a mortality of 90, or 4 more than in 1902 and 40 less than in 1901, and 30 less than in 1900. Bronchitis 224 deaths, or 6 more than in 1902; pneumonia 528 or 16 less than in 1902.

The total birth rate for 1903 was 36.08 per 1000. French Canadians 43.64 per 1000; other Catholics 30.69, and Protestants 20.52; that is .43 per 1000 higher than in 1902 and 3.54 higher than in 1901.

The marriage rate was 10.16 per 1000 or an increase of .94 over the rate in 1902 and 2.01 over that for 1901.

The Hotel Dieu has recently been presented with a new ambulance of the most modern type, fitted with every contrivance which the most expert makers have considered useful in connection with such a vehicle. It is the gift of a number of citizens of all races and creeds, who have subscribed generously to the appeal of Mrs. J. G. H. Bergeron, and is considered by many who have seen it as being the finest hospital ambulance in America.

Dr. Geo. Armstrong who has been ill for several weeks past has again been able to resume his duties at the General Hospital.

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EDITORIAL

CHANGE OF OPINION REGARDING CONSUMPTION.

Tempora mutantur et nos in illis mutamur is truer perhaps with regard to the changed opinions on consumption than on any other disease. As far back as the memory of any medical gentleman living can go, there have not been wanting those who have been vaunting the virtues of some remedy for the disease. But it remains as true to-day as it was many years ago, when a very eminent physician wrote that "no medicinal remedy has, as yet, been found which can be regarded as a specific for tuberculosis."

The pioneer in the matter of applying common sense to the management of consumption was undoubtedly Dr. George Bodington, of Sutton Coldfield, in England. In 1840, he published his treatise on pulmonary tuberculosis, and the natural, rational and successful methods of curing the disease. He advocated a generous diet, and abundance of fresh air holding that the weather was never too cold for such patients, and that their rooms should be kept well aired, so that they would resemble the air outside. But both he and his book met with the most vehement opposition, and he was forced to close his sanatorium, the first of its kind in the world.

Dr. Henry MacCormac published a similar book in 1855, and with the effect of drawing down upon himself a violent storm of abuse. He read a paper in 1861, on the preventibility of consumption, before the Royal Medical Society. The society refused to accord him the usual vote of thanks, regarding the paper as the effort of a deranged intellect.

Veritas magna est et prevalebit. The great Dr. Hughes Bennett with all his brilliancy of language and force of character, espoused these despised views. "The diet must be of a nutritious kind, good ventilation is essential, and proper exercise promotes the appetite" are his words towards the more modern views now prevailing everywhere.

Dr. P. W. Latham, in 1864, urged "a generous diet, continuous ventilation, and regular exercise in the open air." Bennett and Latham were not hooted at so boldly as had been the case with Bodington and MacCormac, though there were not lacking those who sneered to scorn their teachings.

THE CANADA LANCET.

Felix Von Niemazer, whose work on phthisis will ever stand as a monument to clinical study, held, in 1871, that "a patient should be held under conditions to invigorate the body, diet and fresh air are of utmost importance, and the great value of climate is that the patient spend much of his time out of doors."

Villemin, by a series of beautiful experiments proved, in 1865, that tuberculosis is a communicable disease. Others corroborated his findings.

In 1882, Robert Koch made the announcement that he had discovered the germ of the disease. Here was the final proof of what had been held to be the fact, both on clinical and experimental grounds. Now the entire medical profession ranges itself on the side of these views.

Not many months ago, Dr. Latham gave an address before the Hunn Society in which he sums up the treatment thus: (1) a continuous supply of fresh air with no unnatural changes of temperature and absence of dust, (2) good nourishing food in proper quantity (3) absolutely regular life, and (4) graduated exercise without strain.

Veritas nihil veretur nisi abscondi. Under the above method of treatment, 30 per cent. of the cases are being cured, and practically all being benefited. Let the people of this country wake up, and dot the land here and there with suitable sanatoria for the treatment and isolation of tuberculosis.

Steadily, but surely, we are getting at the truth.

MEDICAL EDUCATION IN JAPAN.

Japan has been very much before the world's gaze of late. We learn from the *St. Louis Medical Review* that Professor Kakichi Mitsakura of the Imperial University of Japan, gave an address in St. Louis a short time ago on the Medical Education of Japan. He mentioned that in 1771 a Japanese physician got hold of a Dutch text book on anatomy and, along with some friends, set to work to make a translation. It took them many years to make out their translation of the book, which he rewrote eleven times. This was the first introduction of western medicine into the country. Chemistry, military tactics, natural history, followed.

In 1868, The Imperial University was established. It has a four years' course, admitting one hundred students to each course.

The students who study medicine must take German, as this is the official language of Japan. The professors in medicine are now all Japanese, who speak German, except two honorary professors.

The course of study is based on the model of the American University.

ties. At the end of the second year, the student passes an examination on anatomy, physiology, chemistry, pharmacology, general pathology, etc., and at the end of the fourth year, and examination on medicine, etc.

Attached to the University is a hospital having about four hundred beds. Hundreds of patients go to the hospital daily, so that the students have an excellent opportunity for bedside instruction.

After the student receives his degree at the end of four years he may practice without further examinations. Many, however, stay on at the University three years longer, or go to Germany.

Of late years a number of medical schools have been established to which the students go directly from the Japanese high schools. In these Medical Schools the Japanese language is used. The course of study is full and these schools turn out a very good class of physician. The graduates of these schools may practice without passing a state examination.

There is a third class of medical students who go through an irregular course. These obtain a license by passing state examinations, the first being on the primary subjects and the second on the final branches.

These various forms of schools and licensing bodies have not yet been able to supply the demand for physicians throughout the country, but in course of time the supply will be adequate.

THE ADVANCES IN MEDICINE AND SURGERY.

A short time ago at Leeds, Dr. A. W. Mayo Robson, delivered an address on the above topic. He passed under review some of the achievements that have been made in the healing art, and pointed to the great possibilities for the future. Some of the statements contained in the address are worthy of notice.

The question was raised what some of the great surgeons of the past would think if they visited a modern operating room. They would be astonished to see the patient sleeping quietly, and the most perfect system of cleanliness and asepsis in practical use. Anæsthesia is one of the greatest boons conferred on humanity, and the nineteenth century would have been a prominent one in the history of medicine if it had nothing else to record. The statement was made that it is almost as important to select a good anæsthetist as a good surgeon. The returned surgeon would be attracted by the care and attention to detail. The boiling of instruments, the sterilization under high pressure steam, and the cleansing of the hands, would all be new to him. But this astonishment would be greatly increased by visiting the wards a few days later to find the wounds all healed and the patients doing well with normal tem-

peratures. The lecturer mentioned that, in 1884, when he was appointed to the surgical staff, his predecessor left to him a blood stained coat that had been in use for years. This was at once discarded for washable goods.

To show how great the progress has been, the statistics of the Leed's Infirmary were referred to. In 1870 there were 469 operations with a death rate of 6.6 per cent. while in 1901 there were 4385 operations and a death rate of 2.7 per cent., although the magnitude of the operations performed had been in many cases infinitely greater.

The last report of the Leed's Infirmary gives the following operations, not one of which appears in the report for 1870. The radical operation for hernia, 109; osteomies, 38 cases; removal of the vermiform appendix, 78 times; operations on the gall-bladder, 38; prostectomy, a number of times; several operations on intestines, as removal of a gangrenous portion; operations on the stomach, 94 cases. This is surely no mean advance for 30 years, and much of it in less than 30 years. With regard to the removal of the appendix, it was unknown 25 years ago; and prostectomy for the relief of urinary obstruction is an operation that was not heard of prior to 1885.

But surgery has made great progress in the direction of repair, as well as in the removal of diseased parts. Where a bone has been lost in the arm or leg, a new one can be engrafted and built up. Nerves that have been divided can be rejoined; and a portion of healthy nerve can be transplanted to make good a deficiency. This operation of inserting a portion of healthy nerve was first performed by a Leed's surgeon in 1889, and the motion and sensation restored to a hand that had been paralyzed. But physicians have not been idle, and the work of Hitzig, Ferrier, Horsley, Jackson, Gowers bear splendid fruit in a knowledge of the nervous system which enables us to locate disease, and operate with success.

In the report for 1870, no mention is made of any operation on the lungs or the chest. But now a portion of diseased lung can be removed, and the surgical treatment of an abscess in the chest is looked upon as an ordinary affair. In the "Seventies," Dr. Allbutt and Dr. Wheelhouse, in the Leed's Infirmary, removed fluid from the pericardial sac. But the heart itself has been attacked surgically. Within the last ten years, 38 cases of stab and bullet wounds have been sutured, with 13 cures. Hospital gangrene, pyæmia, erysipelas, septicæmia, and other forms of blood poisoning, secondary hemorrhage, and such like surgical misfortunes, have practically disappeared. It was not uncommon to meet with tetanus after operations 30 years ago, but now it is almost never seen in such a connection. Wise legislation has practically abolished hydrophobia.

In the report of the Leed's Infirmary for 1870, no case of abdominal section was mentioned; whereas in 1901, no less than 569 patients had abdominal sections performed for diseases of every organ in the cavity. In 1875, ovariectomy was performed on 12 patients, of whom 5 died. In 1901 there were 64 ovariectomies, with only 4 deaths, and some of these were malignant, gangrenous, or suppurating cases. It is only necessary to mention the advances during the past 20 years in the knowledge we possess regarding malaria, yellow fever, the serum treatment of diphtheria, tetanus, typhoid fever, and septicæmia. Those achievements must be regarded as triumphs.

But in the matter of preventive medicine, great strides have been made. In 1854 the average life of males was 39.91, and in 1890 it had increased to 43.66. The average life of women has been lengthened by 5 or 6 years. It is impossible for people living now to realize how much vaccination has accomplished. In the German Empire, during the year 1899, not a single death occurred from small-pox in any large city; and only 28 deaths in the entire population of 54,000,000. These deaths took place along the frontier towns. This excellent showing is due to the strict enforcement of vaccination and revaccination in Germany. With regard to consumption, in 1850, there were 3,250 deaths in every 1,000,000. To-day there are only 1,200 deaths in the same number.

In closing, Dr. Robson referred to the progress that is being made in the treatment of lupus and rodent ulcer by the x-rays; and to the active manner in which the etiology and treatment of cancer were being prosecuted at the present moment. As yet, however, the sheet anchor in cancer is early removal by good surgical methods.

CONSUMPTION SANITARIUM.

Representatives of several counties of Western Ontario, including Waterloo, Wellington, Perth, Oxford and Brant, met in Galt November 15th to discuss the question of erecting a sanitarium for consumptives, to be controlled by the counties and cities interested. A resolution was adopted favoring the scheme, and it will be presented to the several Council boards in December next. In discussing the matter it was pointed out that the present sanitarium at Gravenhurst would not take incurable patients, and it was felt that an institution, where those who were not in a position to have proper medical treatment could be taken care of, was a crying necessity.

WILSON'S INVALIDS' PORT.

This is a good wine, and is very carefully medicated with pure and reliable extracts. It contains extract of kola nut, antiseptic salts, aromatics, and iron. It is a valuable tonic in general debility and anæmia. It has been employed in such conditions as anæmia, grip, fevers, malaria, dyspepsia, neurasthenia, insomnia, heat affections, general debility, neuralgia, loss of appetite, etc. We can recommend this wine to those requiring to prescribe a medicated wine.

PERSONAL AND NEWS ITEMS.

Dr. Edgar, of Hamilton, has removed to 16 South Bay street.

Dr. Brandon, who arrived in North Bay lately, has opened an office.

Dr. Balfe, of Hamilton, has removed to 225 North James street, the former residence of Dr. Woolverton.

Dr. Leonard W. Jones closed his office at Athens and has moved to Portland, where he will practice his profession.

Dr. Harris Popplewell, of Brantford, was married in the last week of October to Miss Jennie Fairchild, of Monmouth.

Dr. Ward Woolner, formerly of Collingwood, spent a few days at his home in Parkdale, prior to leaving for Ayr, where he will settle.

L. G. Stewart, M.B., 266 Sherbourne street, sailed in the end of October for Glasgow. He is taking a post-graduate course in Edinburgh and London.

The engagement is announced of Miss Etta Sparks, daughter of Dr. R. E. Sparks, Kingston, to Dr. Charles P. Johns, formerly of Kingston, now of Winnipeg.

A fashionable wedding took place in Brantford recently when Miss Anna Wisner, daughter of Mr. W. S. Wisner, was united in marriage to Dr. Courtland Fissette, of that city.

At the home of Mr. and Mrs. Benjamin Rothwell, Listowell, on 18th October, the marriage was celebrated of their daughter, Miss Nellie, to Dr. Major Henry Langs, of Hamilton.

Dr. J. Watson, who has practised medicine for the past twelve years in Unionville, Ont., has removed to 829 College street, Toronto, where he will resume his professional work.

At the residence of Mr. and Mrs. J. B. McNeill, Berwick Hall, Jarvis street, on 5th November, Dr. Millage Philps, of Chatham and Miss Mary McNicoll, Toronto, were married.

Miss Edith M. Spring, the well-known violinist, daughter of Robert Spring, postmaster at Parry Sound, was married at Parry Sound on October 26 to Dr. W. A. Maclean, of St. Catharines.

Dr. G. E. Marshall, graduate of the College of Physicians and Surgeons, who has just graduated, has opened an office for the practice of his profession at No. 280 Hunter street, Peterborough.

Dr. W. C. Barber has been appointed assistant superintendent of the Kingston Insane Asylum, and Dr. W. T. Wilson has been transferred from the staff of the Hamilton Asylum to the London Asylum.

A pretty wedding took place in Maxwell at the Congregational church, when Miss Mary Isabella McDougald, third daughter of John A. McDougald was married to James P. Hope, M.D., of Alexandria.

The Hospital at Parry Sound was destroyed by fire on 13th November. The fire began at noon, but its cause is unknown. The patients were all removed safely, though with much difficulty. The building was well insured.

Dr. M. L. Dixon, of Frankville, left on 27th October, on an extended trip to Boston, Baltimore and New York where he will visit the leading hospitals. He was accompanied by Dr. Connerty, of Smith's Falls.

Dr. T. W. Griffin has sold his medical practice at Debec to Dr. George O'Donnell. Dr. Griffin will take a post graduate course at Johns Hopkins University, Baltimore, after which he will practice in Woodstock.

Dr. G. F. Emery has left Gananoque for Ottawa to locate permanently in practice as a specialist. On Friday night he was tendered a farewell banquet by citizens and presented with a handsome parlor cabinet and a gold-headed cane.

Dr. J. Halpenny has severed his connection with the Winnipeg general hospital and Dr. A. M. Campbell, recently appointed by the board, takes over the position of medical superintendent, with its duties and responsibilities. Dr. Halpenny has been in the hospital continuously since May, 1900, for a short time as house surgeon, and for nearly four years as medical superintendent.

Dr. W. H. B. Aikins, of Toronto, had a pleasant visit to Cincinnati, where he attended the meeting of the Mississippi Valley Medical Association, and joined in a reunion of a number of medical friends from

different portions of the United States who visited Italy together in 1883, after spending the winter session at the General Hospital in Vienna.

The annual meeting of the Ottawa Medical society was held at the rooms of the Literary and Scientific Society. These officers were elected for the year:—President, Dr. W. I. Bradley; first vice-president, Dr. L. C. Prevost; second vice-president, Dr. J. F. Dowling; secretary, Dr. R. Law; treasurer, Dr. H. S. Kirby; librarian, Dr. R. L. Gardiner; curator, Dr. F. W. McKinnon; executive council, Drs. Powell, Cousens, Grant and Chabot. Reports were read covering the work of the year. There is a cash balance in the bank of about \$75 or \$100. The council will meet soon to outline the work for the year.

BOOK REVIEWS.

DR. VINCENT'S INFANT NUTRITION.

The Nutrition of the Infant, By Ralph Vincent. M.D., Member of the Royal College of Physicians of London, Physician to the Infants' Hospital. Late Senior Resident Medical Officer, Queen Charlotte's Lying-in Hospital, London; Bailliere, Tindall and Cox; Toronto: J. H. Carveth & Co., and Messrs. Chandler and Massey.

The author has given a very reliable and trustworthy exposition of our knowledge of the important subject of infant nutrition. The book contains much useful information on the natural and artificial feeding of infants and the bacteriology of milk. He then takes up the normal growth of the child and such conditions and diseases as inanition, malnutrition, rachitis, scorbutus and the mortality among infants. The book contains excellent instructions regarding the preparation of artificial food. Upon the whole we can recommend this book to all who wish a useful work on the subject of infant feeding.

THE MEDICAL NEWS VISITING LIST.

It is issued in four styles to meet the requirements of every practitioner. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years, \$1.25. Thumb-letter index, 25 cents extra. By mail, postpaid, to any address.

The text portion of **THE MEDICAL NEWS VISITING LIST** for 1906 has been thoroughly revised and brought up to date. It contains among other valuable things, a scheme of dentition; tables of weights and measures and comparative scales; instructions for examining the urine; table of eruptive fevers; incompatibles, poisons and antidotes; directions for effecting artificial respiration; extensive table of doses; an alphabetical table of diseases and their remedies, and directions for ligation of arteries. The record portion contains ruled blanks of various kinds, adapted for noting all details of practice and professional business.

BLAKISTON'S PHYSICIANS VISITING LIST.

The edition for 1906 is now issued. An examination of this year's visiting list shows that it is in every way complete. It is now in its fifty-fourth year of publication and is well known to every physician. The edition for this year contains a good deal of useful information on doses, emergencies, incompatibles, etc., etc. It is issued in several forms as the regular, perpetual and monthly editions. The regular edition for 25 patients per day is sold at \$1.00 and is bound in limp leather with flap and pocket. The paper and every feature of the book are excellent. Philadelphia: P. Blakiston's Sons and Company. Toronto: Chandler and Massey.

THE DOCTOR'S RED LAMP.

A Book of Short Stories concerning the Doctor's daily life. Selected by Charles Wells Moulton. The Saalfeld Publishing Company, Chicago, New York, and Akron, O. Messrs. Chandler and Massey, Toronto, 1904. Price, \$2.50.

This is the second volume of the Doctor's Recreation Series. The present volume contains among many other stories the following: The Surgeon's Miracle by Joseph Kirkland, The Doctor's of Hoyland, by Conan Doyle, Doctor Santos, by Gustave Morales, The Curing of Kate Negley, by Lucy S. Furman, a Doctor's Story by E. M. Davy, John Bartine's Watch, by Ambrose Bierce, Two Wills, Ian Maclaren's Doctor of the old School, etc., etc. The mechanical make-up of the book is certainly very fine. Scattered throughout it there are a number of very fine plates. The paper, type and binding are such as would please the most fastidious. The stories are all particularly appropriate in a volume intended for the doctor's recreation reading. These stories throw much side light upon the work of the doctor in different countries and under very varied conditions. In addition to furnish the reader much pleasure, they also yield much profit and valuable information. We would expect this series shall enjoy a large sale.

INTERNATIONAL CLINICS.

A quarterly of Illustrated Clinical Lectures and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynaecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. Edited by A. O. J. Kelly, M. A., M. D., Philadelphia; J. B. Lippincott Company, Vol. III., fourteenth series, 1904. Price, \$2.00.

The present volume is of special interest as it contains a very full and valuable symposium on syphilis of twelve articles. These articles are of more than passing interest. They take up every phase of a disease whose manifestations are legion. The treatment is particularly well covered by them. The other sections of this quarterly issue are Treatment, Medicine, Surgery, Gynaecology and Neurology. There are a number of very fine plates in connection with the articles, on syphilis being particularly helpful. We congratulate the Editor on his splendid collection of papers and the publishers on the handsome make-up of the book.

A TEXT-BOOK OF THE DISEASES OF WOMEN.

By Charles B. Penrose, M.D., Ph. D., formerly Professor of Gynecology in the University of Pennsylvania. Fifth edition, thoroughly revised. Octavo volume of 539 pages, with 221 fine illustrations. Philadelphia, New York, London: W. B. Saunders & Co.; Canadian Agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto, 1904. Cloth, \$3.75, net.

With astonishing regularity a new edition of this excellent text-book is called for, and it appears to be in as great favor with physicians as with students. Indeed, this book has taken its place as the ideal work for the general practitioner. The author presents the best teaching of modern gynecology, untrammelled by antiquated ideas and methods. In most instances only one plan of treatment is described.

The new edition has been carefully revised, much new matter has been added, and a number of new original illustrations have been introduced. In its revised form this volume continues to be an admirable exposition of modern gynecology.

A HAND-BOOK OF SURGERY.

For Students and Practitioners. By Frederick R. Griffith, M.D., Surgeon to the Bellevue Dispensary, New York City; Assistant Surgeon at the New York Polyclinic School and Hospital. 12mo volume of 579 pages, containing 417 illustrations. Philadelphia, New York, London: W. B. Saunders & Co.; Canadian Agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto, 1904. Flexible leather, \$2.00, net.

Dr. Griffith has given us a little work of great merit. It is a brief outline of the principles and practice of surgery, written as concisely as is

possible with clearness. We are sure it will be valuable alike to the student and the practitioner, because the entire subject of surgery is covered, including all the specialties, as Diseases of the Eye, Ear, Nose and Throat; Genito-Urinary Diseases; Diseases of Women, etc. There are also articles on Life Insurance, Rape, Sexual Perversions, Microscopy and on many other subjects of great importance to the practising surgeon. There are 417 illustrations, selected for their clearness, accuracy and general usefulness. We predict that Dr. Griffith's work will be to Surgery what Dr. Stevens' manual is to Medicine.

A TEXT-BOOK OF MATERIA MEDICA.

Including Laboratory Exercises in the Histologic and Chemic Examinations of Drugs. For Pharmaceutical and Medical Schools, and for Home Study. By Robert A. Hatcher, Ph. G., M.D., Instructor in Pharmacology in Cornell University Medical School of New York City; and Thorald Sollmann, M.D., Assistant Professor in Pharmacology and Materia Medica in the Medical Department of the Western Reserve University of Cleveland. 12mo volume of about 400 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co.; Canadian Agents: J. A. Carveth & Co., Limited 434 Yonge St., Toronto, 1904. Flexible leather, \$2.00, net.

Students of medicine, as well as pharmacy students, will undoubtedly welcome this work. The authors are teachers of much experience and in this foretelling book present a work on the subject of Materia Medica in an entirely new way, teaching by actual experimental demonstration. Part I. comprises a guide to the study of crude drugs, both official and unofficial; while in Parts II. and III. the histologic and chemic examinations of drugs are considered in a scientific, yet clear and simple manner. All the histologic descriptions are supplemented by laboratory exercises of important drugs, so that the student becomes insensibly acquainted with their construction. Throughout the entire work general stress is laid on the recognition of adulterations. We can strongly recommend this work as reliable, practical, and excellent in every way.

DAVIS' OBSTETRICS.

New (2d) Edition. A Treatise on Obstetrics. For Students and Practitioners. By Edward P. Davis, A.M., M.D., Professor of Obstetrics in Jefferson Medical College; Professor of Obstetrics and Pediatrics in the Philadelphia Polyclinic, etc. New (2d) edition, thoroughly revised and much enlarged. Octavo, 800 pages, with 274 engravings and 39 full-page plates in color and monochrome. Cloth, \$5.00, net; leather, \$6.00, net. Philadelphia: Lea Brothers & Co.

From a practical standpoint this work is all that could be desired. Dr. Davis has furnished a thoroughly scientific and brilliant treatise on

Obstetrics. His method is original and comprehensive, and the scope of the work includes cognate subjects of great importance which are not met with in other books on the subject.

In preparing this new edition Professor Davis has subjected it to a complete rewriting throughout, resulting in an enlargement of about two hundred and fifty pages. Together with the established principles and practice of Obstetrics he has incorporated the latest additions to our knowledge of the subject, which promise to be of permanent value. In its new form it accordingly represents the science and art of Obstetrics to the date of issue. The work has always been notable for the abundance and instructiveness of its illustrations. The series has been revised equally with the text, and any engravings or plates susceptible of improvement have been replaced.

THE PHYSICIAN'S POCKET ACCOUNT BOOK.

By Dr. J. J. Taylor, is a neat, compact, easily kept and strictly legal book, carried in the pocket, always with you, showing each person's account at a glance. All entries are made but once, on the day when the services are rendered, in plain, legal language, and require no posting or further attention. Published by the Author, 4105 Walnut Street, Philadelphia.

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MISCELLANEOUS.

VISITING AND POCKET REFERENCE BOOK FOR 1905.

The following is a comprehensive contents: Table of Signs and how to keep Visiting Accounts, Obstetrical Memoranda, Clinical Emergencies,

Poisons and Antidotes, Dose Table, Blank leaves for Weekly Visit List, Memorandum, Nurses Addresses, Clinical, Obstetrical, Birth and Death and Vaccination Records, Bills Rendered, Cash Received, Articles Loaned, Money Loaned, Miscellaneous, Calendar 1906 126 pages, Lapel Binding, Red Edges. This very complete Call Book will be furnished by the Dios Chemical Co. of St. Louis, Mo., on receipt of 10 cents for postage.

AWARDS AT THE ST. LOUIS EXHIBITION TO MESSRS. BURROUGHS, WELLCOME & CO.

Gratifying evidence of the recognition extended to British commercial enterprise is furnished by the honours awarded by the Committee of the St. Louis Exhibition to Messrs. Burroughs, Wellcome & Co's., exhibit of "Wellcome" Brand Chemicals, "Tabloid" and other pharmaceutical products, and "Tabloid" Medical Equipments. Three grand prizes and three gold medals have been conferred for the scientific excellence of these products.

The Committee on Awards of the Louisiana Purchase Exposition, St. Louis, have conferred upon the Wellcome Chemical Research Laboratories the distinction of a grand prize and three gold medals, in recognition of the importance and educational value of the chemical and pharmacological researches conducted in these laboratories under the direction of Dr. Frederick B. Power.

W. R. WARNER & CO'S., PREPARATIONS. GRAND PRIZE.

Highest award of the Louisiana Purchase Exposition, (St. Louis) was awarded to Wm. R. Warner & Co., for Pharmaceutical Preparations over all competition.

JAEGER PURE WOOL.

Many supposed chronic disorders of the respiratory organs, of the stomach & digestive organs, & of the bowels; rheumatic complaints, indigestion, & other diseases attributed to chill; excessive corpulence, etc., may be remedied, alleviated, & above all, *prevented*, by treating the body with the highly sensitive, warm-blooded organism which it is, provided with a complex apparatus of pores & blood-vessels, whose functions are of vital importance. Hitherto the general tendency has been to treat the body as though it were an inanimate dummy on which anything, however hygienically unsuitable, might be hung, at the dictate of fashion or habit.

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THE BERNIER EXPEDITION.

The daily journals have not given many particulars of the Dominion Government expedition which left Quebec sometime ago to make a complete survey of the northern coast of Canada. This expedition, which sailed in the S. S. Arctic, will also establish a series of police posts on Hudson Straits and elsewhere, and for this purpose a large and ample supply of food was taken. Among other things, the Government have purchased a large quantity of Lacto-Globulin, having decided that this food will be of decided benefit on sledge journeys, and as a special diet in sickness, and to give a salutary variety where so much preserved and sterilized food must of necessity be eaten.

There seems little doubt that if Nansen had been furnished with a highly nourishing and readily carried food of this nature he would have reached the North Pole when he made his famous last dash, and Captain Bernier has recognized this fact by taking a considerable quantity of the most nourishing and easily assimilated food known.

It is a matter of some congratulation that this food should be a Canadian discovery and made in Canada.



The Late D. C. MacCALLUM, M.D., M.R.C.S., Eng.
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THE SURGICAL TREATMENT OF COMPLETE DESCENT OF THE UTERUS. *

By E. C. DUPLEY, M.D., Chicago.

COMplete descent of the uterus, descent to the third degree, which may be defined as that deviation in which a part or the whole of the uterus is outside of the vulva, is always associated with extensive injury to the pelvic fascia, the pelvic connective tissue, the muscles of the vaginal outlet, the perineum and the vaginal walls: in fact, these injuries of the pelvic floor constitute the essential lesion, the mal-location of the uterus being an incidental factor.

The uterus in its normal position lies across the pelvis, the fundus pointing in a slightly upward, anterior direction, and the external is in a slightly downward, posterior direction. The long axis of the uterus, in this normal direction, makes an acute angle with the long axis of the vagina which extends from the vulva upward and backward in the direction of the hollow of the sacrum. Generally speaking, mobile anteversion, with some degree of ante flexion, is the normal position of the uterus; at any rate, the uterus, in its normal range of movements, does not deviate, unless temporarily, beyond the limits of a certain normal anteversion and ante flexion.

In the etiology and treatment of descent, the practical significance of this acute angle between the axis of the uterus and vagina is very great, because the uterus in the act of prolapse must descend through the vaginal canal in the direction of that canal, that is, a coincidence of the two axes is a prerequisite of descent. Now, if the essential condition of descent is a coincidence of the axes, it follows that one factor, at least, in the treatment of descent must be to restore the normal angle between the axes.

In labor the anterior wall of the vagina is so depressed, stretched and shortened by the advancing child that, during and after the second stage, the anterior lip of the cervix uteri may be seen behind the urethra. This location of the cervix, so close to the anterior wall of the pelvis, necessarily involves great stretching of the utero-sacral supports which normally hold the cervix uteri and, together with it, the upper extremity of

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: vagina close to the hollow of the sacrum. This function of the post-
 .rine ligaments having been temporarily impaired, the upper extremity
 the vagina is displaced forward so that the uterus, having sufficient
 ace between itself and the sacrum, instead of maintaining its normal
 terior position, may fall backward into retroversion and, thereby,
 ing its own axis into line with the direction of the vagina. Frequent-
 the change in the direction of the vagina, from the normal oblique
 the abnormal vertical, is still further increased by injury to the vaginal
 tlet. The perineum may to torn in any direction and, what is more
 rious, it may be torn away from its public attachments, and, in this
 ty, may be displaced backwards toward the tip of the coccyx. In fact
 ch displacement is so common, as the result of injuries to the perineum,
 to suggest the propriety of a change in terminology from laceration to
 splacement of the perineum. The upward extremity of the vagina be-
 g displaced forward, the lower extremity backward, and the direction
 the over-stretched, dilated vagina, now being vertical, the heavy
 erus, having its long axis in the same vertical direction, has all the con-
 tion favorable to progressive descent.

If the puerperium progress favorably with prompt involution of the
 elvic organs, and if the relaxed vesico-vaginal wall and other parts of
 ie pelvic floor, especially the utero-sacral supports and the broad and
 und ligaments, recover their normal tone, then the whole pelvic floor,
 cluding the uterus, resumes its normal relations. But if the enlarged,
 eavy uterus remains in the long axis of the vagina, especially if the fun-
 us uteri be incarcerated under the promontory of the sacrum with the
 eral supports stretched so much and for so long a time that they cannot
 cover their contractile power, and normal involution of the pelvic or-
 ans be arrested, then descent may not only persist but may progress
 ith constantly increasing cystocele and rectocele until the entire uterus
 as extruded itself through the vulva.

It is most important to remember that complete prolapse of the
 uterus is only an incident to prolapse of the pelvic floor. The whole
 echanism is that of hernia and the condition is hernia; for the extruded
 ernial mass drags after it a peritoneal sac which, hernia-like, contains
 mall intestine. This sac forces its way to the pelvic outlet and ex-
 udes through the vulva, having the inverted vagina for a covering.

The prolapsing uterus may be related to the vaginal walls in either
 ne of two ways: The prolapsing vaginal walls may drag the uterus
 own after it; or the uterus itself may descend along the vaginal canal by
 orce of its own weight and drag with it the re-duplicated vaginal walls.
 xtreme prolapse of the uterus, the organ being covered thus by reflected
 aginal walls, has given rise to considerable confusion in pathology, and
 y many standard authors has been wrongly called hypertrophic elonga-

tion of the cervix uteri. In a given case, the possibility of infra-vaginal elongation may be settled easily by placing the patient in the knee-breast position, when the uterus of its own weight will fall towards the diaphragm and the reduplicated vaginal walls will unfold, utero-vaginal attachment appearing in the normal place, instead of being as it seemed high up on the walls of the uterus. Those cases in which reduplication of the vaginal walls does not almost entirely explain the apparent great elongation of the cervix, are rare exceptions. When formerly these mechanical conditions were attributed to hypertrophic enlargement of the uterus itself and were regarded as adequate indications for the removal of the cervix, the surgeon in the attempt to remove what he supposed was the elongated cervix uteri sometimes invaded the bladder anteriorly and the rectum posteriorly.

Surgical Treatment. In passing, it may be well to mention for the purpose of condemning it an operation perhaps more frequently performed than any other for the cure of complete descent, namely, the operation which generally passes under the name of Stoltz. This operation is designed to narrow the vagina and thus to maintain the uterus somewhere in the pelvis above the constriction. Operations of this class usually consist of the removal of an elliptical piece from the anterior or posterior vaginal wall, or from both, and of closing the exposed surfaces by means of a purse-string suture. No effort is made to restore the normal axis of the uterus and vagina. The whole purpose is to make the vagina so narrow that the uterus cannot pass through it. Such operations generally fail because they leave the uterus and vagina in the same axis, and because the restricted vagina cannot resist the downward force of the uterus which almost invariably dilates the vagina a second time, forcing its way through with reproduction of the hernia. Moreover, the operation always does permanent harm because it shortens the vagina thereby making it draw the cervix away from the sacrum towards the pubes, so that the body of the uterus may have room to fall backward to the position of incurable retroversion. We may, without discussion perhaps, throw out all operations belonging to the Stoltz group. The same may be said of all plastic operations in which the vaginal surfaces are exposed by superficial denudation and brought together by sutures.

After a prolonged trial of the principle surgical procedures which have been made use of for the cure of complete descent, I am prepared to lay down certain essential principles as follows:—

An efficient operation on the vaginal walls should have for its object, not the narrowing of the vagina, but the restoring of the normal direction of it with a double purpose so that (a) the upper extremity, together with the cervix uteri, shall be in its normal location within an inch of the second and third sacral vertebrae, just where the utero-sacral liga-

ments would hold it if their normal tonicity and integrity could be restored; and so that (b) the lower extremity of the vagina shall be brought forward against the pubes. The fulfilment of these two indications will restore the normal obliquity of the vagina, and will hold the cervix uteri so far back towards the sacrum that the corpus uteri must be directed forward in its normal anterior position of mobile equilibrium. With these conditions, the uterus, being at an acute angle with the vagina and having little space posteriorly, cannot retrovert and turn the necessary corner which would permit it to prolapse in the direction of the vaginal outlet. In order to accomplish this, two things usually are necessary:—

1. *Excision of the Cystocele or Anterior Colporrhaphy.* The plastic operations performed on the anterior and lateral walls of the vagina by Sims, Emmet, myself and others, which have consisted of superficial denudation and reefing of the anterior or lateral walls of the vagina, have been only partially successful, first, because they did not adequately force the cervix uteri into the hollow of the sacrum; second because efficiency requires deeper work than superficial denudation can accomplish, and third, because these operations did not utilize the broad ligaments sufficiently for support.

The above principles, emphasized by Reynolds in a recent paper, have lead me to modify my own operation materially. Complete prolapse, being hernia, should be treated according to the established principles of herniotomy by reducing it and then excising the sac in such a way as to expose strong fascial edges which should be firmly united by sutures. The absurdity of treating any other hernia by superficial denudation and reefing or tucking in the surfaces by sewing them together must be apparent to any one. In order to indicate the part which the broad ligaments must have in a correct operation, it is only necessary to observe the fact that vaginal hysterectomy commonly results in holding up the pelvic floor and with it the rectum, vagina and bladder, because in this operation the broad ligaments are usually fixed to the vaginal wound. But why should not the same result be aimed at by similar means even though the uterus is not removed? The operation of Anterior Colporrhaphy which I would urge is performed as follows:—

First Step. Split the antero-vaginal wall, that is the vaginal plate of the vesico-vaginal septum, by means of scissors, from the cervix uteri to the neck of the bladder, then to strip off the vaginal from the vesical layer of the vesico-vaginal wall, cutting away the redundant part of the vaginal plate.

Second Step. The redundant part of the vaginal wall having been removed, extend the incisions and remove the mucous and submucous structures to either side of the uterus, being sure to reach the fascial

structures which are in direct connection with the lower margins of the broad ligaments, or what is better, to reach the ligaments themselves.

Third Step. Introduce silk worm gut or chromic catgut sutures so that when tied they will draw the loose vaginal tissues and the broad ligament structures, on either side of the cervix uteri, in front of the cervix, so as to force the cervix back into the hollow of the sacrum.

Fourth Step. The sutures introduced in the third step having been tied, additional interrupted sutures are introduced to unite the vaginal wound from side to side. This suturing is continued to a point near the urethra, when most of the redundant vaginal wall will have been taken up. There will usually remain, however, the lower portion of the cystocele and, perhaps, some urethrocele, which cannot be disposed of by bringing the margins of the wound together from side to side, but can be taken up by uniting the remaining part of the wound in a transverse direction.

Even at the risk of prolixity I repeat that it is essential to remove the entire thickness of the vaginal layer of the vesico-vaginal septum.

Contraindications to Elytrorrhaphy. Elytrorrhaphy is usually unnecessary and therefore contraindicated in descent of the first degree. The special province of the operation is in complete prolapse or procidentia when associated with cystocele. The operation further is contraindicated by tumors and adhesions which render replacement and retention impossible, and in diseases of the uterus or its appendages which demand their removal. When such contraindications do not exist, elytrorrhaphy and perineorrhaphy in a majority of cases are quite as effective and, therefore, to be preferred to the more dangerous and mutilating operations of hysterectomy.

2. *Perineorrhaphy and Posterior Colporrhaphy.* As already stated, it is most important to appreciate the fact that, in nearly every case of procidentia, the lower extremity of the vagina is displaced backward. This is consequent upon subinvolution of the pelvic floor, and especially upon subinvolution or rupture of the perineum, or of some other portion of the vaginal outlet. Unless, therefore, the posterior wall of the vagina and the perineum can be brought forward to their normal location under the pubes, so as to give support to the anterior vaginal wall, the latter will fall again, will drag the uterus after it, and the hernial protrusion (cystocele and prolapse) will be reproduced. The treatment, therefore, of procidentia must always include an adequate operation on the perineum, or, more comprehensively speaking, upon the posterior wall of the vaginal outlet. The operation must be performed so that it will carry the lower extremity of the vagina forward to the normal location close under the pubes; then, if the anterior colporrhaphy has been adequate and has carried the upper extremity backward, the whole vagina will have

its normal oblique direction, and its long axis will make the necessary acute angle to the long axis of the uterus.

Hysterectomy, if indicated, should be performed by the vaginal route. As an operation for procidentia, hysterectomy is open to the following comments: Procidentia, as already shown, is hernial descent, not merely of the uterus, but also of the vagina, bladder and rectum. Complete prolapse often occurs after the menopause, when the uterus has become an insignificant rudimentary organ and, therefore, may be removed easily. Cases are numerous in which, after vaginal hysterectomy, the pelvic floor and, with it, the vaginal walls have protruded again through the vulva—a result which may be expected unless the operation has included anchorage of the upper end of the vagina to its normal location by stitching the severed ends of the broad ligaments into the wound made by removal of the uterus. The indications for perineorrhaphy, as a supplement to hysterectomy, is the same as after anterior elytrorrhaphy.

As laid down in the foregoing paragraphs, the utilization of the broad ligaments is the essential factor in the treatment of complete procidentia. The operation of elytrorrhaphy above described unfortunately may either fail to bring the lower edges of the broad ligaments sufficiently in front of the uterus to enable them to hold up the uterus and vagina, or the ligaments having been stitched in front the stitches may not hold.

Consequently, in complete procidentia elytrorrhaphy even though well performed may fail, at least, this has been my experience in a number of cases. Therefore, the completely prolapsed uterus may have to be removed in order to secure the entire cut ends of the broad ligaments to the upper part of the vagina, and thereby give absolute support. As before stated, the operation should include the treatment of the hernial factor in the lesion, that is, removal of the redundant portion of the anterior vaginal wall. Generally speaking, the indications are somewhat as follows:—

1. Extreme cystocele not associated with the most extreme procidentia should be treated by anterior colporrhaphy and perineorrhaphy.
2. Cystocele associated with complete procidentia properly may be treated by hysterectomy, anterior colporrhaphy and perineorrhaphy. Anterior colporrhaphy in all cases.
3. Conditions intermediate between the two indicated above, and cases of very feeble or very aged women will call for special judgment whether hysterectomy be omitted or performed. It is, however, a fortunate fact that the completely prolapsed uterus, even in aged women, is removed usually with ease and with safety.

Other operations designed to decrease the weight of the uterus by removal of a part of it are of questionable value. Amputation of the cervix to lighten the weight of the uterus has been practised much for

the spurious hypertrophic elongation already described. Since this condition is rare, if not indeed unknown, it follows that it seldom will furnish an indication for amputation of the cervix uteri.

Alexander's operation and abdominal hysterorrhaphy belong to the surgical treatment of retroversion and retroflexion, not of procidentia. The object of those operations is to suspend the uterus from above. Hysterorrhaphy, which perhaps fulfils this indication better than shortening the round ligaments, may be indicated in cases of extreme relaxation of the uterine supports and greatly increased weight of the uterus. The results of it in complete procidentia, however, usually will not be permanent unless it is supplemented by adequate surgery in the vagina.

INTRA—ABDOMINAL ANASTOMOSIS.*

By A. GROVES, M.D., Medical Superintendent Royal Alexandra Hospital, Fergus, Ont.

MR. PRESIDENT and Members of the St. Thomas Medical Association,—When you kindly honored me with an invitation to address your honorable and learned body, I was in doubt as to what subject in particular I should take up; but in view of the great importance of anastomosis within the abdomen, it appeared that the discussion of this would not be inappropriate. It might be permitted me to say that I shall not aim at giving a compilation of what is found in text-books, but rather an account founded upon our own work with a description of the methods we employ.

Taking up first, cases of cancer of the pylorus, if they have gone beyond the stage when a resection can be done,—and too often this is the unfortunate state of affairs,—then an anastomosis should be made.

In doing this operation, I make an incision either in the median line or to the right of and parallel to it through the sheath of the rectus but not splitting the muscle, which is drawn outwards. Having examined the stomach and decided upon the point at which the anastomosis is to be made, a loop of jejunum is drawn up and fastened to the stomach by a line of Lembert sutures, then a McGraw ligature is passed and tied as tightly as possible and the Lembert suture continued so as to completely close the site of the anastomosis. In order to prevent the possibility of a vicious circle, the two limbs of jejunum are joined by a McGraw ligature and Lembert suture.

The Point I usually choose to make the anastomosis is the lowest part of the lower border of the stomach anteriorly, in order to secure thorough drainage; this point is comparatively near the pylorus, the

*Read before the St. Thomas Medical Society, November 9, 1904.

place where nature intended the stomach to empty itself and it is usually good surgery to keep as close to Nature as possible.

Instead of using the elastic ligature as recommended by McGraw, I have been using strong silk ligatures with perfect results. There is no doubt a silk ligature can be drawn tightly enough to strangulate the tissues and that is all that is required. Nature proceeds to remove the crushed stomach and bowel wall and an opening results. Should there be any doubt as to the sufficiency of the crushing power, two ligatures may be used, each embracing one half the tissue to be dealt with, and, by so doing, an opening will result sooner which is often a matter of importance. Should it be feared that an opening made in the manner described is not of sufficient size, a square or triangular fenestrum can be obtained by putting in ligatures so as to surround and cut off the blood supply of as much tissue as may be judged sufficient, but usually a single ligature is all that is required.

Care is necessary in selecting the knuckle of jejunum which is to be applied to the stomach wall, and it should never be chosen hap-hazard; for cases have occurred where the lower part of the ileum within a short distance of the ileocaecal valve has been attached to the stomach and the whole small intestine short circuited. The proper portion of the jejunum to be attached is about 18 or 20 inches from the duodenum.

Since the advent of the McGraw ligature I no longer use the Murphy button, Senn's plates, or any other appliance or method, the ligature being superior in every respect save only that an immediate opening is not secured; but, on the other hand, no foreign substance that can cause future trouble is left in the body; no viscus is opened and, therefore, the danger of sepsis is greatly lessened and the operation can be done more rapidly.

I am inclined to think that it is immaterial whether the ligature is passed longitudinally or transversely in the bowel, but it is better to join the limbs by a lateral anastomosis.

As this operation is a type of all intra-abdominal work, in so far as general technique is concerned, I might here indicate the methods we follow: I use no antiseptic solutions of any kind, unless sterile saline be so designated; because I believe that chemical antiseptics are injurious to normal tissues, especially when used in sufficient strength to be of any value as germicides. Tissues injured by corrosive poisons are not in a condition to resist the invasion of pathogenic germs, nor are they in a state favorable for the normal processes of repair. In preparing my hands, I use soap with hot running water and at least six sterile brushes, but do not use any of the so-called antiseptics and always devote forty or fifty minutes to the work. I insist upon my assistants carrying out the same cleansing process, each finger and especially each nail being

separately brushed and scrubbed. The washing of the hands in basins, even if the water is changed several times, is not by any means as certain or as satisfactory as a stream running over the hands and carrying away impurities. The cleansing of the hands cannot be too thoroughly done and often is only half accomplished. A surgeon, of all men, should be careful of his hands.

During the operation sterile normal saline alone is used. That this is sufficient is fairly well proven by the fact that we have had many hundreds of operations without one case of sepsis, if the parts were not infected to begin with. Bringing powerfully poisonous and irritant substances, like bichloride of mercury, for instance, into contact with a clean wound is injurious and unnecessary. The idea aimed at is to keep the wound free from germs, poisons and foreign matter generally.

For ligatures and sutures, silk is invariably employed and meets every indication; it can be made absolutely sterile very rapidly, is easily manipulated and can always be depended upon.

In making openings through the abdominal wall, muscular tissues are separated and, if possible, not cut and the nerve-supply of parts interfered with as little as possible.

The wound is put together layer by layer, for in no other way can the natural relationship of parts be secured. Good surgery requires that the abdominal wall should be left as nearly as possible in its normal condition, and no one will pretend that through and through suturing will produce such a result. It is claimed by some that by this means the wound can be closed more rapidly, but even if that were true, which it is not, speed does not justify bad methods.

When each layer of tissue is brought together neatly, there are no cavities left in which blood can collect as so often happens in mass suturing.

Anyone who compares the accurate apposition secured in a wound where tissues are joined carefully as Nature intended, with one where clumsy, inaccurate, through and through suturing is done, will be convinced that theoretically and practically the former is the only method that should be employed. A surgeon who has grasped the true principle will never, in my opinion, use the slovenly through and through method.

When accurate apposition of layer to layer is secured, the fact that fascial integrity is restored prevents the possibility of hernia. A hernia, following an ordinary laparotomy, is a very unfortunate thing for the patient and is not creditable to the surgeon; and, yet, that is what too often results from the unscientific through and through sutures.

I once knew of a case where a practitioner, I had almost said a surgeon, removed an ovarian tumor, closing the abdominal wall by through-

through sutures; a ventral hernia resulted and some months after, when she was straining at stool, the thin cicatrix gave way, her bowels shed forth, and she died a victim of a bad method.

It is possible that in competent hands even a bad method, may be followed by a fairly good result, Providence being on the side of the patient, and such a catastrophe as the above avoided; but no one is justified in exposing his patient to the risk, when by following the normal anatomical method all danger is removed.

Regarding the question of speed it seems to me that operators should custom themselves to rapid work, for every minute increases the danger. The man who completes an intra-abdominal anastomosis, including the closure of the abdominal wound, in twenty or thirty minutes or less, will have better results than he who takes an hour or two for the same work. I distinguish between hurried work and rapid, the latter to be aimed at, the former avoided.

In dressing the wound after the sutures are in, no powdering, dusting or medicating of any kind is done. Plain sterile gauze with absorbent cotton is all that is used. If the bacteriologist finds his culture medium kept sterile by a plug of absorbent cotton, the surgeon need not fear to trust the same means of protecting his wounds from infection.

I would advise an exploratory laparotomy in every case of pyloric ulcer, unless there were some special reason why it should not be done, and this exploration should be performed early, usually before a tumor can be made out. If the disease cannot be removed, a gastro-enterostomy is imperatively indicated. On account of the free drainage the stomach can empty itself into the bowel, thereby the vomiting is relieved, and the patient will gain in weight in many cases to a marked extent. The case in the pylorus being no longer irritated by the stomach contents pressing over it, ceases to progress so rapidly, so that the patient is not only relieved but also his life prolonged.

Again, in cases of chronic ulcer of the stomach and in many cases of acute ulcer, an early anastomosis is indicated and I think the importance of this cannot be too strongly urged. If a patient has chronic dyspepsia, even if a tender spot cannot be made out, whether vomiting of food has occurred or not, the propriety of an operation should be considered. It is often said that to advise an operation is a serious thing, but it is much more serious not to advise one, where a life may be lost while a physician hesitates.

It is sometimes forgotten that dyspepsia is only a symptom and not a disease, that many cases can be cured by a simple and comparatively safe operation, and that patients should no more be allowed to suffer from such conditions than they were allowed in old times to suffer from chronically diseased appendices. There are few men now who would

not advise the immediate removal of a diseased appendix the moment he diagnosed the condition, and the time is fast approaching when the rule for immediate operation will be applied to chronic disease of the stomach. We all see patients to whom every imaginable tonic has been given, the stomach washed out, all kinds of dieting tried without effect, and very often these patients are said to be neurasthenic to high degree, while the original and sole cause of all their trouble is a diseased stomach which is entirely curable by establishing free drainage.

Just here I might be permitted to protest against what I believe to be an error that is widespread, and is even taught by good authors and teachers. I mean the use of such terms as, "Functional neuroses of the stomach independent of organic disease." One of our leading authors says that diagnosis of this condition is often difficult and that, "Organic disease either of the stomach or nervous-system must be excluded."

To my mind there can be no functional diseases, either of the stomach or of any other organ. A function is nothing tangible, it is but an expression to convey the idea of what the work of an organ is and if the work is not done normally there is some definite cause, either in the organ itself or in some other part of the body. We may be unable to find the cause but it nevertheless exists.

In order to make the idea more clear it might be illustrated in this way. The function of a watch is to keep correct time, but if it did not do so and it were taken to a watchmaker, he would never be guilty of the absurdity of saying that the watch was in perfect condition and the fact of its not keeping time was a functional derangement.

So in the human body and especially in the stomach, there is a cause for the disturbance of function and the practitioner who thoroughly believes this will often find a cause in an unsuspected ulcer, a pyloric stenosis, a chronic gastritis or some other condition, which, if not curable without operation, may be cured by it.

Again the term neurasthenia like neuralgia is simply a euphemism for the fact that we do not know what the disease is and do not like to say so. How many of us dismiss cases which we do not understand with the assurance that they are neurasthenic or neuralgic, forgetful of the fact that both conditions depend upon a cause and are not of themselves diseases. Loose, in-exact expressions, such as these, have a paralyzing effect upon investigation, and many patients are doomed to drag out a miserable existence because physicians fail to think precisely, taking effects for causes, or appearing to believe an effect can exist without a cause. Especially is this true in conditions arising from eye-strain, which as a rule is not diagnosed.

Up to the time that McGraw devised the method of making anastomosis by means of a ligature, these operations were necessarily se-

rious; but now the element of danger is largely eliminated, and a vast field opened up for the relief of human suffering.

Again, in cases of dilated stomach with all its accompanying distress, when the usual treatment fails, a gastro-enterostomy will give immediate relief and accomplish permanent cure.

It is not only a much simpler operation than gastro-plication, but is founded upon sounder principles. Gastro-plication aims at removing the effect of disease by artificial means; but an anastomosis, by providing drainage, removes the cause of the disease and Nature gradually restores the stomach to its normal size and condition. After an operation of this kind, it is remarkable how the vomiting ceases and the catarrhal symptoms subside. The appetite returns and the patient is able to take any ordinary diet without discomfort.

In cases of displaced stomach, while it is true that shortening of the ligaments or fixation of the stomach is of great value, still even in these cases an anastomosis is sometimes necessary so great is the degree of dilatation. The great truth that especially needs to be urged is that, if the stomach can freely and easily empty itself into the bowel, it is placed in the best possible condition to return to its normal state and have its normal functions restored.

I do not think the so-called "Y" operation is the best in these cases. It is more difficult to do than anastomosis by ligature, on account of the bowel having to be cut in two and both the stomach and bowel opened; besides, the danger of infection is greatly increased, the operation is prolonged and there is always the possibility of defective closure of the openings. Other things being equal, the simpler of two operations should always be chosen, especially if it is safer.

cancer for instance, the lumen of the bowel is narrowed and, consequently, the passage of its contents interfered with. Here, if the diseased portion cannot be removed, the ideal means of giving relief is an anastomosis of the bowel above the obstruction with that below by the ligature method.

There is also a considerable number of cases where, on account of

ture method. Where there is occlusion of the bowel on account of its being fixed at an acute angle or from cicatricial contraction, a ligature passed into the bowel an inch or an inch and a half from the angle on its inner side, brought around over the spur and out of the bowel the same distance from the angle at which it entered, then tied tightly and the two limbs of bowel united by Lembert sutures so as to enclose the ligature, will be followed by complete relief.

Where an end to end anastomosis required to be made, the first essential is that the junction shall be absolutely impermeable to the contents of the bowel; next, the final result should leave the lumen of the

bowel unimpaired and with no stricture or tendency to stricture or narrowing; thirdly, the operator ought to be sure that it can be completed in a short time. If these indications can be met without leaving a foreign body other than the stitches in the bowel it would appear that the highest ideal would be reached.

I prefer to join the ends of the bowel by continuous suture passed through all the coats, so as to bring the peritoneal surfaces into apposition, and over that a continuous Lembert suture. Probably it takes a little longer than the putting in of a Murphy button, but the difference in time is very slight and the danger from the presence of a foreign body in the bowel is avoided. It is also to be remembered that the lumen of the bowel is narrowed when an anastomosis is made by means of the button. Mechanical appliances left in the intestine are always a source of danger and should never be used if the end to be attained can be reached without them.

I have tried a method in which a ring of mucous membrane is separated from the lower end of the cut bowel, the muscular and peritoneal coats being turned back like a cuff, then the upper end of the bowel is stitched by continuous suture to the cut mucous membrane of the distal bowel, the muscular and peritoneal cuff is turned up and stitched by the Lembert method to the invaginated proximal bowel. In this way an absolutely tight joining is assured. The greater the pressure within the bowel the tighter the joint becomes and the less the danger of leakage. The closure of the wound does not depend entirely upon accurate stitching but upon the apposition of the overlapping coats of bowel.

Neither of these methods requires the use of any special instruments or appliances which is a point of considerable value. The simple end to end anastomosis is the operation I prefer on account of the ease and rapidity with which it may be done and the good results following.

Such briefly are my views which, with your permission, I shall illustrate by reference to cases occurring in my regular practice, for after all no man's opinions in surgery are entitled to much weight unless founded upon actual experience. Interesting as an historical retrospect may be, important as a statistical record undoubtedly is and valuable as a paraphrase of the opinions of others can be made, I venture to hope that a practical paper without padding, while less brilliant, may be more beneficial.

The first case to which I shall refer was one of cancer of the stomach which had involved not only the pylorus and a large part of the stomach walls, but had also invaded the retro-peritoneal glands, so that a resection was out of the question. Here a gastro-jejunostomy was done but the two jejunal limbs were not anastomosed and, although the woman

recovered and lived many months, I believe the result would have been better had a jejunal anastomosis been done at the same time.

The next case was one where the patient was greatly wasted as a result of persistent vomiting and indigestion. For the relief of this she had taken large quantities of medicine and carried out every kind of treatment that had been advised, but without effect. Her condition continually got worse. The stomach was dilated and its function, as an organ of digestion, practically in abeyance. Here a pyloric stenosis was found to exist as a result of gastric ulcer and, in addition to a pyloroplasty, a gastro-jejunostomy was done by the McGraw method, but using silk in place of rubber ligatures. The two limbs of jejunum were also anastomosed. At the end of three weeks the patient was taking ordinary diet without the slightest discomfort and perfect recovery followed. Her dyspepsia is cured and, as she expressed herself, she would not know she had a stomach were it not that the cravings of hunger remind her.

The third case was one of traumatic stricture of the bowel which was held at an acute angle by adhesions. A ligature was passed into the bowel at the inner side of the inner angle as described above, tied tightly, covered by means of a Lembert suture and the patient has had no further trouble.

The fourth illustrative case was one of cancer of the ascending colon which was practically closed by the new growth so that nothing remained but operative measures. An artificial anus might be advised, with all its repulsiveness and trouble to the patient; but, instead, I made an opening over the lower part of the descending colon and united the ileum to it as near the ileo-caecal valve as possible by the ligature method, using a strong silk ligature which evidently had established an opening by the second day, with great relief to the patient. The contents of the small intestine now pass directly into the descending colon, the remaining part of the colon being side-tracked, as it were and the affected portion placed at rest; the progress of the disease is retarded and the patient's condition one of comparative comfort in contrast to what it would have been had an artificial anus been made.

Regarding end to end anastomosis, instead of referring to one of my own cases, I shall take one from the practice of Dr. Morrow, of Arthur, late resident surgeon of St. Luke's Hospital, Ottawa, and more recently of the Royal Alexandra Hospital, Fergus.

His patient had a strangulated hernia where the bowel was found to be gangrenous and was accordingly resected. The ends were put together by a continuous suture, including the whole thickness of the bowel and over this a line of Lembert suture. The result was perfect recovery.

These cases are types of many met with and to go on quoting more would be a needless waste of time. Let it suffice to say that the great relief from chronic stomach troubles, which hitherto have been amongs the bugbears of the profession, is rapidly being placed upon a rational basis and that in this field, if I read the signs aright, we are on the eve of great advancement.

ADDRESS OF WELCOME.*

By J. C. DAVIE, M.D., Victoria, B.C. Vice-President Medical Council.

MR PRESIDENT and Gentlemen,—In the absence of Dr. Proctor, the President of the Medical Council of British Columbia—which Council is the representative body of the medical profession in this Province—it becomes my pleasing duty, as Vice-President, to welcome to British Columbia, and especially to the City of Vancouver, the members of the Canadian Medical Association.

This is the first meeting of the Canadian Medical Association held in British Columbia, the most Western Province of the Dominion of Canada, and we are extremely pleased to see so numerous and representative a body of the profession present.

Here in British Columbia we have to grapple with the same diseases and difficulties that present themselves in Europe and other centres of civilization. We operate on the brain and chest; do hysterectomies; operate on the stomach, intestines, gall-bladder, and its ducts; on the ovaries and fallopian tubes; on the kidneys and urinary bladder, etc.; in short, we have recourse to all the recognized surgical procedures of our time, and by the aid of the teachings of Lord Lister do our work with wonderful success. Inspired by the spirit of the West, acute septic peritonitis from whatever cause arising, was early treated in British Columbia by promptly performed abdominal section; and we soon learned by clinical experience that early excision of the vermiform appendix was the safest way of treating this dangerous little organ when it became diseased.

Some of us have been astonished to find that in some parts of Europe the advisability of prompt operation in appendicitis is still a question of great divergence of opinion. Recent literature, however, shows a decided tendency towards the adoption of the views held generally by the profession on this continent.

As a result of the abdominal sections which I have performed, one fact has been made apparent to me. No doubt the same thing is well known to most surgeons, though I think sufficient attention has not been

*Canadian Medical Association, August, 1904.

LANCET.

arative frequency of enteroptosis is a common thing to find, upon movable a condition of the liver, —its greater curvature below the he same point, one or both kidneys and appendages crowded down acements I need not dwell upon. ything approaching such a condition one is driven to the conclusion a very great extent upon their that abomination, the corset.

t the work done by medical men k by the immense advances made eriology was then unknown, with diseased processes. Clean, and rist, and little had been done in branches of our work, Preventive ned to look upon the knowledge ittle account in comparison with e imagination to picture the mem-dred yéars hence, in their turn, r ignorance and want of knowl-

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ucidation, amongst which is that on. This requires another man to tell us what it is, and to give

cal Associations of large districts ese meetings the most advanced our profession are brought for- views and discussions are placed ure of the day, thereby adding to hout the world.

That this meeting will be one of great interest and instruction to us all I am confident, the presence of so many men of eminence in the profession assuring its success.

Again, in the name of the medical profession of British Columbia beg to extend our most hearty and cordial welcome to our visitors.

THE OPERATIVE TREATMENT OF SPINA BIFIDA. *

By E. R. SECORD, M.D., C.M., Brantford, Ont.

THE comparatively frequent occurrence of Spina Bifida, being found roughly speaking, somewhat more frequently than once in every thousand births, its hopeless prognosis unless suitably treated, and the oft-times favorable results to be attained by such suitable treatment, have led the writer to bring forward the following facts for consideration, and I trust, discussion.

Leaving aside for the present any reference to the exact frequency of occurrence, to the etiology, to the anatomical conditions, to the symptoms and to the prognosis, my remarks will be confined almost entirely to the question, "Given a case of Spina Bifida, what treatment will, in the majority of cases, bring about the best result?"

In 1885, a special committee of the London Clinical Society,¹ appointed to consider the various methods in vogue for the treatment of Spina Bifida, reported in favor of the method by the injection of Morton fluid. Their report was based on 71 collected cases treated by this method, of which 35 recovered, 27 died, four were relieved and five unrelieved.

Writing in 1902, Mr. W. H. A. Jacobson,² of Guy's Hospital, says in this connection, "Excision of the sac—— is the method which I recommend, and which in spite of certain grave dangers promotes, I think, the best results in carefully selected cases." Excision of the sac is defined by Van Buren Knott³ as meaning, "The removal of the excessive skin and meningeal membranes, the separation of the nerves, if present, from the sac wall, and their restoration to the spinal canal."

I have quoted Mr. Jacobson's opinion as being that of a fairly conservative, and well recognized surgical authority, and it is very interesting and instructive reading, to follow the literature of this subject during the seventeen years intervening between the dates above mentioned, and to see the pendulum of surgical opinion slowly but steadily swing round until Mr. Jacobson's words practically voice the ideas of modern day surgeon.

As illustrative of the higher class of surgical opinion at the beginning of this period, I may quote two well-known men:—

*Read at the Canadian Medical Association, August, 1904.

(1) Sir Frederick Treves,⁴ in 1884, wrote regarding excision, "If the sac contains cord elements, the result will prove fatal, if not success may possibly follow."

(2) In 1887, Robert W. Lovett⁵ wrote, "In considering operative procedures for the removal of the tumours one fact is self-evident, that such operations are only applicable in cases where it is definitely determined that the cord is not present in the sac, and that of course restricts the field very much."

He further says, "If Morton's injection fails, and it seems reasonably sure that the cord is not present in the sac, a simple excision of the tumour should be done. If there is reason to suspect the presence of the cord in the sac, excision is of course out of the question, and the case must be left to itself."

Viewing the matter in the light of subsequent experience and teaching it is difficult to comprehend how such a position should have been considered tenable. On the one hand, in the case of the simple cases where the cord is not present, he speaks of a simple excision of the tumour; and on the other, in the complicated cases, he speaks in the following by no means sanguine terms of the treatment by injection, "It is generally accepted that the presence of the cord in the sac, when it can be definitely established, though not a positive contra-indication to treatment by injection, renders its utility somewhat questionable, and adds to its danger." Why then use the injection method at all?

Treves' opinion on this point was, "That he was aware of no case of cure from iodine injection, where it was definitely proved that a free communication existed between the interior of the sac and the spinal canal, that could not be even temporarily cut off, and where at the same time the cyst contained the cord or some considerable portion of it."

Once more it may be asked where then were the arguments in favor of Morton's method? The London Clinical Society's figures in themselves showed a lower mortality rate from operative measures (23 cases, 16 recoveries, 7 deaths), than from injection (71 cases, 35 recoveries, 27 deaths) but this is got over by Lovett by remarking that, "The cases were probably very carefully selected." Judging from his remarks quoted above, regarding the dangers of the injection treatment in the complicated cases, it is very probable that the cases for treatment by Morton's fluid were just as carefully selected. Under any circumstances it is fair to conclude that the cases most suited for treatment by Morton's injection are the simple meningoceles, the very cases in which Behrend⁶ speaks of excision as the simplest of operations. Lovett argued that successful cases of treatment by injection were constantly being reported in the journals. The probability is that the unsuccessful cases were not reported, since Paul F. Eve, nineteen years later, in the second edition of

the same work⁷ says, "The injection treatment however, is very unsatisfactory, as the majority of cases thus treated prove. On account of the many fatal terminations which have occurred as a result of this mode of treatment, a complete excision of the sac has been resorted to." Referring now to personal experience, I may say that in 1898 I saw an apparently uncomplicated meningocele treated by injection of iodine, which was immediately followed by convulsions and death.

As far back as April 1880, W. H. Fitch⁸ reported a case successfully operated upon in the following words, "It is hardly necessary to say that in this case excision of a spina bifida was not premeditated. It was situated in the lumbar region, was $2\frac{1}{2}$ inches by $1\frac{1}{2}$ in size, and presented none of the usual signs of the disease. The excision, however, was complete and, after the loss of much cerebro-spinal fluid, the wound healed gradually and the child was cured."

In 1889, the *Journal of the American Medical Association* remarked editorially,⁹ "That the testimony of recent operators seemed to indicate three pretty clearly defined facts:—

(1) That the escape of a considerable quantity of fluid from the sac is not necessarily attended by dangerous sequelæ.

(2) "That there is less danger from injury to the nerve structures than has been believed.

3. That many of the injurious results of former operations were doubtless due to lack of proper precautions relative to the prevention of sepsis.

In the *Archives of Pediatrics*¹⁰ for the same year appeared two articles, the one discussing the question as to the possibility of the successful operative removal of a spina bifida, and the other reporting a successfully operated case.

The operative treatment being thus placed on at least a justifiable basis, in subsequent discussions and case reports more attention is paid to the methods of operating than to a justification of the operation.

Apparently, the dangers incurred by the use of an open incision, owing to the always present chance of sepsis, deterred operators for the next few years from using this method. Thus, in 1891, F. A. Harris, M.D.¹¹ reported the case of a child five days old with apparently a lumbar meningocele, where subcutaneous ligature of the pedicle resulted in sloughing of the entire mass followed by healing and cure.

Following this, in 1892, F. J. Groner, in the *Medical Record*,¹² describes the case of a child seven months old with a lumbar meningocele, where ligature of the base was followed by operative removal of the tumour. Primary union did not occur but the child recovered.

A further modification of this method is that described by Dr. Henry Howitt, of Guelph, in 1895.¹³ He makes an incision through the skin

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neck of the sac, thinking that in some cases this may relieve or cure the condition.

The question as to what influence the operative treatment of spina bifida has in producing subsequent hydrocephalus is one worthy of serious consideration. Nicholls, on the one hand, expressly states that he does not think that the operation has any effect in producing this condition but, as we have seen, believes that it may have a certain curative influence. On the other hand, there are scattered cases in the literature where hydrocephalus developed soon after, and apparently depended for its production on, the operation.

For instance, Charles G. Cumston¹⁶ reports a case of spina bifida in the region of the fourth and fifth thoracic vertebrae. The cord was in the sac but was easily reduced, and the pedicle closed by suture. The child died on the fifth day with symptoms of hydrocephalus. Again, De Forest Willard¹⁷ describes the case of an infant on which he operated at five weeks, where on opening the sac the entire cauda equina was found adherent to the posterior wall, the filaments being dissected free and replaced in the spinal canal. Primary union was secured; but the child, at the time of writing, was apparently becoming hydrocephalic, the author remarking, "A not uncommon sequel."

Lithgow¹⁸ reports a case of a child, ten months old, with a spina bifida in the lumbar region. The sac was excised, the pedicle closed, and the skin flaps brought together and sutured, the child making a complete recovery, but died ten days after operation from convulsions. The most natural explanation of this fatality would seem to be that there was hyper-secretion of cerebro-spinal fluid which was unable to produce hydrocephalus, owing to the age of the child and consequent fairly firm union of the sutures, did produce increased intra-cranial pressure, with convulsions and death.

It is difficult to see just what influence the removal of the sac of spina bifida could have in producing hydrocephalus. Assuming that the latter condition is dependent on a hyper-secretion of cerebro-spinal fluid which is by no means admitted by all authorities; or, even going further and assuming that the spina bifida itself is dependent on the same cause, why should the removal of the sac set up renewed or increased secretion?

It is said¹⁹ that the cerebro-spinal fluid is secreted by the choroid plexuses, that its secretion is constant but variable in quantity, and the means for its escape are supplied by the tubular prolongations of the subarachnoid spaces along the nerve roots, which prolongations are continuous with the lymphatic vessels of the nerves. If we could assume that the sac of a spina bifida acted as a resorbent of the cerebro-spinal fluid, that the operation, but cutting off this means of escape, produced a tendency toward retention, which under certain circumstances might be sufficient to produce hydrocephalus, the question would be solved.

sufficient to produce enough intra-cranial pressure to bring about a hydrocephalic condition, we would have a fairly complete chain of events.

I have seen practically the same series of conditions occur in the case of an occipital meningocele of about the size of the child's head. It was removed by operative measures, with perfect success, primary union being secured, but within three weeks a hydrocephalic condition was apparent, which rapidly increased and soon ended in death.

It is difficult to see how the mere escape of a certain quantity of cerebro-spinal fluid, as recommended by Nicholls, could prevent the occurrence of this complication; but, on the other hand, it is equally difficult to understand how the blame for the occurrence of hydrocephalus after an operation can be laid at the door of the operation itself, though *post hoc* is not necessarily *propter hoc*, especially since there is, so far as I am aware, no evidence that the sacs have any such resorbent action as I have suggested.

Another possible mode of action is that the sac, by rapidly increasing in size, affords room for the increased quantity of fluid, that when the sac is operatively removed this fluid must find room for itself elsewhere, and, in so doing, produces the hydrocephalic condition. If this were the case, then it would seem that these cases where there is rapid enlargement of the spinal sac would be the ones where hydrocephalus would be the most likely to develop after operation. Whether this is the case or not could only be determined by observation of a long series of such cases, and I know of no such observations.

As already noted, Nicholls feels that the practice of dissecting nerve cords from the interior of the sac is not without risk. He accordingly advises that where nerve tissue is present on the sac wall, the latter should be cut into ribbons parallel with the nerve cords, the portions free from such excised, and the internal surface of the remaining nerve cords smoothed with the point of a knife and replaced in the spinal canal. If excision of even small portions of the sac is impossible, the interior is smoothed as before, and the opening closed, reduction in the bulk of the tumor being obtained by fibrous contraction.

The following cases may be described as illustrative of the results to be attained by operative treatment.

Case 1, P. H., aged eight years, presented a large discharging mass in the lumbo-sacral region. At birth, a somewhat pedunculated mass, about the size of a large hen's egg was present, low down in the middle of the back. There was no paralysis, no club-foot, nor other evidence of nerve involvement. The physician in attendance advised aspiration, followed by injection, and this method of treatment (presumably the injected fluid was Morton's mixture or some modification thereof) was carried out shortly after birth. Considerable inflammatory reaction fol-

lowed the injection, which apparently went on to suppuration. At any rate a purulent discharge soon appeared, which continued, in varying quantities, up till the present. At times there was mal-odor, at times there was none. The general tendency of the mass was to enlarge and become harder, and the general health of the child remained fairly good. At the time of the operation, the patient was a rather well nourished little girl, about eight years of age. At the lumbo-sacral junction in the middle line was a mass of about the size of an orange, slightly flattened antero-posteriorly, and attached above to the body by a short pedicle about two inches in diameter. The surface of the tumour opposed to the skin of the back was formed of healthy skin, whereas the posterior surface of the mass was extensively ulcerated, and discharged pus freely, which latter however chiefly came from a sinus, the opening of which was situated at about the centre of the posterior surface. By probing this sinus was found to pass directly inwards for about $2\frac{1}{2}$ inches, and apparently to end blindly. The mass was not tender. On palpation of the pedicle the spinous process of the last lumbar vertebra appeared to be defective.

Operative removal was advised and carried out in the following manner: Elliptical incisions were made around the pedicle of the mass through the skin, latter being retracted. The pedicle was then cut across. It had been my intention to do this slowly, keeping up a sharp lookout for any evidence of meningeal protrusion. From the moment of the first incision into the tissues of the pedicle, the haemorrhage was so very free that this object was lost sight of in the presence of the more immediate necessity of removing the mass and controlling the bleeding. Owing to the hardness and brittleness of the tissues, the control of haemorrhage was extremely difficult, artery forceps simply crushing the tissue and causing more bleeding than ever. The actual cautery assisted somewhat, some half dozen or more artery forceps were left in situ, and pressure applied by means of dressings firmly bandaged in place. The patient was practically moribund, and was removed from the table with the full expectation of early death. The pressure, however, controlled the haemorrhage and she rallied immediately, the forceps being removed at the first dressing. The wound healed by granulation without any bad symptoms. Needless to say, there was no patent meningeal protrusion.

Case 2, Babe D., aged 2 days, had a typical meningocele in the lumbar region. The skin overlaying the tumour was extremely thin and rupture seemed imminent. There was no evidence of any nerve tissue being contained in the sac.

Elliptical incisions were made through healthy skin, and the skin separated laterally from the pedicle of the tumour. The sac was then

opened, absence of nerve tissue established, the neck of the sac sutured from inside with fine catgut in two rows, redundant tissue removed, and the skin incisions brought together and sutured with silk-worm-gut. Primary union was obtained and the stitches were removed on the tenth day.

The foregoing may perhaps be said to warrant the following conclusions:—

(1) There are no absolute contra-indications to the operative treatment of spina bifida. The worse the case the more marked becomes the futility of other than operative measures, and the greater the probability that the child will die if left alone. Paralysis, hydrocephalus and marasmus—often spoken of as contra-indications—should not be so considered. Each has been and may be improved.

(2) As to Method. In meningocele open sac, after dissecting up the skin by a pair of lateral incisions, suture of the neck, and removal of redundant tissue. In myelo-meningocele, and syringo-myelocele the same method, combined with loosening of the nerve cords and return of the same to the canal, should be followed.

(3) As to Prognosis. Meningoceles, with more extended experience, should yield practically uniformly favorable results. In cases of syringo-myelocele and myelo-meningocele, owing to oft present nerve involvement, the results will not be so encouraging. Paralysis may be relieved.

(4) As to Technique. Absolute asepsis, combined with as little handling of nerve tissue as is essential, will give the best results. Loss of cerebro-spinal fluid in moderate amounts is not of importance. Operating on an inclined plane is not necessary. The use of bony flaps is rarely if ever essential.

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THE DECLINE OF ATROPINE.

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TIME was, not so very long ago, when the ophthalmologist's remedies consisted of atropine, nitrate of silver and eserine. Thanks, however, to the discoveries of modern chemistry and the consequent manufacture of synthetic products a new era has dawned on ocular therapeutics. One of the earliest effects of the new condition of things is the decline in the use of atropine. Its use has declined for several reasons:—

1. Because of its toxic properties.
2. Because of the inconvenience caused by the paralysis of accommodation and the length of time required to recover the use of the organ for near vision.
3. Because other drugs have been discovered which attain curative ends without the disadvantages of atropine.

The toxic effects of atropine may be produced in persons who have a special idiosyncrasy, by very small quantities of the drug, either applied to the eye or taken internally. I have known two drops to produce delirium, scarlatinoid rash, dilatation of the pupil, maximum difficulty in swallowing, and rapid and weak pulse. Unfortunately, we are unable to foresee in whom these symptoms will be produced and our first intimation arises such as conjunctivitis and swelling of the lids. A more serious local complication is glaucoma, hence it has become an axiom that atropine should not be used in persons over 45 years of age, this being the age at which glaucoma is most liable to manifest itself.

The inconvenience and discomfort caused by its use may sometimes be a serious matter, from a financial point of view, for the patient. I have often known working men laid off from work for two or more weeks by the injudicious use of atropine in removing a small foreign body from the cornea. My practice is to instil a few drops of castor oil, and, if there is considerable conjunctival irritation, a 2 per cent. solution of cocaine and boric acid. The objections to the promiscuous use of atropine do not apply with so much force to duboisine and hyoscine, but they are not as useful therapeutically.

The treatment of eye inflammations has been greatly assisted by the discovery of adrenalin. It can be used alone or in combination with cocaine or eserine or both in a 1-2000 solution. The eserine should be used in the form of the sulphate and not in greater strength than $\frac{1}{4}$ of a grain to the ounce of water. Dionin is a remedy of great value in iritis, in corneal ulceration and cyclitis. It has a remarkable lymphagogue action and is of great use in recent effusions into the humors of the eye. It is

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I recently a patient who had been of the right eye, following severe ng reduced to counting of fingers onin, his vision improved to 15- but it should be used cautiously epithelium and its continuous use

CINES. *

), Victoria

The subject embraced in the title comprehensive, in fact, to admit an occasion like this. We have cuss, and must necessarily be as e in our treatment of the various port period we shall have the ben- gathering of the medical profes- you not to, and I know you will w of the evils which I shall en- ng which I may say in this con- use the evils wrought by paten o the medical practitioner almos

erience of it. The patient whos we have spent our best thoughts y some glowing advertisement o e when we have got his ailmen ay towards recovery.

ay be case after case, of the won nd, after utterly ruining his sys gles back to our office, more dea voice, says "Doctor, I don't seer oesn't; but it never occurs to hin y other agency than the unfortu the midst of his task.

s been "doctoring" himself wit ly ruined the handiwork of th ur office door when he should i ion and the undertaker. In bot a miracle by effecting a cure. I

n Medical Association, August, 1904.

with the assistance of Providence, he does so, nothing more is heard of it; human nature is inherently forgetful, I shall not say ungrateful. If, on the other hand, as is more often the case, medical science is unable to restore outraged nature, then the physician comes in for all the blame.

It is an old axiom in the legal profession that a man who is his own lawyer has a fool for his client. The same thing may just as truly be said in medicine, with the startling difference that in the latter case the man is tinkering with his life, instead of his property. He can survive the loss of his property, but his life was given to him as a trust to be used for the benefit of himself and the community at large. The responsibility would, therefore, seem to be all the greater.

One thing, however, may be said in mitigation of the indulgence in quack medicines, namely, that human nature is more or less confiding. So that a statement, made with a positive air of authority and a fair show of truthfulness and accuracy, is taken for granted by the average person.

The press, which has done such an enormous amount of good, which performs such a stupendously important mission in the affairs of men, and to which we owe so much, is also responsible for the working of so many wrongs. It is a natural sequence of events that this should be so. There is unfortunately no perfect human agency or creation; and the very fact of the vast power and influence of the press, is the cause of almost equally great evils being wrought. The public has been educated to look on the press as an authority; hence the belief of the public in statements appearing in newspapers. The public, on the average, does not stop to think that the press is a commercial, money making institution, and that the lurid statements, set out in flaring headlines, are nothing more nor less than advertisements, paid for at so much per line or so much per inch.

We see every day advertisements prominently placed in otherwise respectable newspapers which are not only a moral disgrace but are cruel lies. Promises are made which every medical man knows are impossible of being carried out. Cures are claimed which cannot be investigated; and, altogether, the absurdity and exaggerations are so great that it is a wonder any one is found willing to be duped. But as drowning men catch at straws, when respectable papers print such nonsense as "Sure cure for cancer," or "Mrs. So.-and-so in the last stage of consumption cured by Mother Somebody's syrup," and an attached letter from Mrs. So-and-so certifying to her cure, how can one blame these poor creatures? It would, I think, astonish our financiers did they realize how much money goes out to these grasping charlatans.

Only a few months ago, a father brought his son to my office for advice. The boy was in the last stages of consumption and, after giving some instructions, I told the father there was no hope for his son.

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credible as it may seem, that man paid, if I remember rightly, 24.00 for "sure-cure" consumption remedies during the next six

He told me this when he came to inform me of the boy's death, claimed that he had not much faith in them, but saw it stated in advertisements that cures followed the taking of the medicine in cases given many doctors. As the old man said "this seemed to be a chance my son's life, and, although I could not afford much, I thought it / to try it."

is is but a sample. Every medical man can speak as to similar

other case that made a deep impression on me was that of a young the early stages of consumption. I sent her to California for the r cure. On the way down she saw a "sure cure" advertisement, and the advertisers and remained in San Francisco to take their s. She had then four or five hundred dollars, but left San Fran- ter three months, all her money gone, and came home to die in hree weeks. This I always considered pure and simple murder, egret that it is not within the power of the law to prosecute per- io so shamelessly commit the double crime of robbery and murder. xt-pad who beats a person to death with a loaded stick or sand- d then robs him, is hanged. The so-called respectable patent e vendor who lures the money out of the pocket of an unfortunate, working girl, a youth, or father of a family, and often prevents ceiving reasonable treatment at a time when it would be of some lthough in the eyes of God equally guilty with the brutal high- n, is yet allowed by the law to go absolutely free. It is difficult eive which is the more cold-blooded of the two.

ie must admit that considerable ability and business acumen are nes shown by patent medicine vendors. A chain of symptoms is d, some of which are almost certain to be present in almost any . We all know how a nervous, anxious, or suffering patient will nce any or all the suggested symptoms. On this knowledge the medicine vendor plays. He works it to a finish, rakes in his gold some instances can compare his banking account favorably with f our business millionaires.

is wonderful, but it is true, how many intelligent persons take medicines and never stop to consider whether it is reasonable that often of a powerful nature, could be combined in suitable quanti- various diseases and differently constituted individuals. Cocaine ium are freely used, and no doubt their use gives a favorable first sion. They are all right in their proper places, but the question hen, how, and how much is to be given in each individual case, is a perplexing one even to the medical attendant. All practition-

ers are aware of the fact that these medicines, and others too, which relieve present symptoms are actively injurious and may lead to serious consequences.

Another common constituent found in patent medicines is alcohol. Now alcohol is an excellent vehicle and preservative, and is often useful and necessary in the prescribing of drugs, but each case has to be judged on its merits; and whether alcohol is to be given in large or small quantities, or at all, depends on the particular case under treatment.

Recently it has been stated in the daily papers that alcohol is present in large quantities in patent medicines. I have thought it my duty to enquire into this and, therefore, looked over the advertisements in several papers and picked out some of the best known mixtures.

I have taken from local advertisements the following and examined same for alcohol and found the following percentages: Paine's Celery Compound, 18.25; Warner's Safe Cure, 16.12; Ayer's Sarsaparilla, 21.19; Sanmetto, 19.7; Burdock Blood Bitters, 18.16; Hood's Sarsaparilla, 16.24; Lydia Pinkham's Mixture, 26.00; Peruna, 26.04; Whiskey from Savoy Public House, 36.00. For the purpose of comparison, I calculated the alcohol from straight whiskey which I bought at the Savoy Public House in Victoria, and found it contained 36 per cent alcohol. Now, the difference between this and some of the patent medicines mentioned is not very great; yet, should whiskey be prescribed in as wholesale a manner as patent medicines are used, there would be an outcry; but when alcohol is taken in such quantities as is contained in certain patent medicines, unknowingly by women and young girls, the question becomes serious; and, I trust, this Association will by resolution appeal to the authorities to take some action, or, at least institute an inquiry on this important matter.

SUPPOSED CASE OF GLANDERS IN THE HUMAN SUBJECT.

From the note book of Dr. James H. Richardson, we take the following case:—

On the night of Monday, the 10th of April, 1848, Dr. Morrison called upon me to go with him to see a case which somewhat puzzled him. The patient was a man living down in "the Park", as it is called, away below Gooderham's Mill, close by the back of the Don. Dr. Morrison stated that he had been attending him for an intermittent for some time, and had given him some quinine, and a little pill hydrarg. That he had complained of rheumatic attacks in different parts of his body, and that one knee in particular was inflamed. He further said that he had been called to see him during the morning of Monday, and found him with considerable febrile action, and with full hard pulse, on account of which he

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aken from him some 10 oz. of blood. His bowels were costive and I ordered some purgative. I saw him at 12 o'clock Monday night. He was then somewhat better than he had been a short time previously. His countenance was very anxious, his eyes somewhat congested, his pulse very quick, weak and irritable, he was sweating very profusely, so all the clothes were wet. The most remarkable symptom of all however was a singular affection of his breathing, which was hurried and noisy. The inspiration gave rise to a clacking sound, difficult of definition, not sibilous but as of the passage of air through some tough substance. Upon requesting him to breathe with his mouth open, he obtained considerable relief, the sound disappearing; when left to himself it also diminished, but became again more severe when he was excited, and was accompanied by some spasmodic action. He had a cough—no tenderness of the larynx—or at least a scarcely perceptible tenderness there. He could not speak plainly but with hesitation and sobbings—which I afterwards found it was common to him. His tongue was slightly furred—brown towards the back. His bowels were costive still. While looking at him, I observed several large swellings like boils—one situated on the back of the left hand, one on the side of his nose, some on his arms; and on calling Dr. Morrison's attention to them, I found that they had developed themselves during the last 24 hours. They were large, hard, purplish, with considerable redness around, and one or two, I do not now recollect which, were evidently suppurating. They seemed very singular to me, and attracted my attention on that account. His left knee was swollen and red, just anteriorly was one of these lumps, larger than any of the others. He was in great prostration, he being unable scarcely to grasp one's hand, some subsultus, although slight. Altogether his condition seemed so formidable that we both despaired of any amelioration. His intellect, I remark, was untroubled.

In regard to the trouble of breathing we could not refer it to laryngitis. A review of the symptoms, there being no swelling nor tenderness of the throat, there being but little of such febrile action as one would expect, breathing being easier when the mouth was open. We were led to infer that some, if not all of the difficulty lay in the posterior nares—the posterior fauces when inspected were considerable congested and of a purplish cast.

Dr. Morrison gave him some camphor, or the like, and applied a muscadine poultice to the throat.

On Tuesday morning I saw him again. He seemed still weaker, his countenance more anxious—he was sweating most profusely till all was wet on him—bowels still costive—respiration not more difficult than before—pulse weaker and more accelerated. On looking at him I perceived

a thin mucous matter running from his nose; upon enquiry he said that his nose ran very much. While consulting with Dr. Morrison, the peculiar eruptions before mentioned, along with the nasal discharge came forcibly to me and my first enquiry was whether, or not, he had been attending some glandered horses. I was told that he had a diseased horse and had had several for the last 6 months. On examining the one in his stable I found it labouring under profuse nasal discharge, opaque muco-purulent.

On our way home, his neighbours stated that he had glandered horses for some time and had been advised often to part with them. That he had been seen to drink out of a pail after his horses, etc., etc. To wipe the nose of his horses with his own pocket handkerchief, to cleanse their noses with his own fingers, etc., etc. One old man whom I asked whether he had not some glandered horses or not,—“Yes, indeed, and it’s the very same disease that he’s got himself.”

The similarity in the breathing of the horse and the man was very apparent. On Wednesday morning the poor fellow died—exhausted yet still sensible I believe. A messenger came up to ask Dr. Morrison and myself to examine the body, but on going down there the next morning we found everything arranged for a grand flare up—an “illegant wake”—seats, pipes, whiskey and all the necessities and received the peremptory denial when about commencing operations from an Irishman who had been attending him very faithfully, and had been made one of his executors—Mr. Ripley being the other. So that we were cheated quite out of our means of ascertaining the condition of the parts. The general opinion was that he was similarly affected with the horses, and indeed I came to the same conclusion.

I saw two more of the horses on Thursday and found them both glandered. There was running of a glairy fluid from one, and submaxillary enlargement in but one.

Youatt states that the glanders is in this state more virulent and more contagious than in any other.

Hamilton Medical Association had the largest turnout in its history, and the most enjoyable, at its annual election of officers and banquet, held 8th December, in the Hamilton Club. Dr. Walter Langrill, the retiring president, was in the chair, and Dr. H. S. Griffin was vice-chairman. Between 40 and 50 medical men sat down. The toast list was short but the speeches were of a high order, and the music, of which there was an abundance, was excellent.

the achilles jerk on both sides, and absence of the knee jerk on one side only, we found a very decided lymphocytosis. It was precisely the same in two others who had syphilitic laryngitis, one of whom, moreover, presented total abolition of the knee jerks. Finally, we observed in a patient suffering from an aortic dilatation which was accompanied by an inequality of the pupils with Argyll-Robertson's sign, an abundant lymphocytosis upon two successive trials. It is certain that in all these cases the presence of lymphocytes in fairly large numbers is the manifestation of a central lesion which renders the prognosis distinctly more gloomy.

General Paralysis.—All nine cases of general paresis examined presented an abundant lymphocytosis, twice only was there an associated increase in the muscular elements. Four of these patients had the Argyll-Robertson sign, and the inequality of the pupil was a constant feature. In but four cases was there a history of Syphilis to be obtained.

Argyll-Robertson Pupil.—In all observations of general paretics and tabetics, proven or suspected, we carefully remarked the coincidences which existed between the Argyll sign and the condition of the cerebrospinal fluid. We were thus able to verify what had been stated by Babinski & Nageotte, Vidal & Lannine, for in fourteen cases of tabes or general paresis, showing the sign, we found an abundant lymphocytosis fourteen times. Further in these cases the Argyll sign was also accompanied by the meningeal reaction, the latter being absent in one tabetic, one suffering from syphilitic laryngitis, and one with pyloric stenosis, all of whom showed a definite Argyll-Robertson pupil.

Tubercular Meningitis.—We shall not emphasize the results obtained in thirteen cases of tubercular meningitis. Always a marked lymphocytosis was present, and the polynuclears were met with in equal or slightly greater numbers than the mononuclear elements in but two cases. Nine times we demonstrated Koch's bacillus by direct examination of the sediment. In several of these cases it was lumbar puncture which furnished an exact diagnosis. In one observation in particular it permitted us to diagnosis meningitis, when the case was clinically obscured by an acute alcoholic delirium.

Cerebrospinal Meningitis.—We are able to follow three cases of cerebrospinal meningitis. One terminated in death, notwithstanding repeated punctures and hydrotheraphy (hot.) The purulent fluid, charged with polynuclears, contained a large number of diplococci having all the reactions of the meningococcus. The two other cases were, on the contrary, mild attacks. The polynuclear cells were unmixed; but the patients left the hospital too soon to follow the evolution of the meningeal reaction.

Zona.—We had in one year nine cases of zona. Eight times a lymphocytosis existed. Always extremely abundant at the height of the

disease, the elements were pressed closely one upon another showing a veritable mosaic pattern. This lymphocytosis was always rather tenacious. In the case where the cytological examination of the cerebro-spinal fluid was negative, though made upon three occasions, there was but a slight herpes and little pain, the patient having suffered from an acute bronchitis upon a well marked emphysema.

Syphilitic Hemiplegia and Meningitis.—In two patients, young hemiplegics with syphilis, we found lymphocytosis. Vigorous mercurial treatment cured in one case and improved the other.

Disseminated Sclerosis.—We made three punctures in a case of disseminated sclerosis and, although the cerebro-spinal fluid was found normal at the first exploration, yet two and three months later there was a moderately large lymphocytosis.

Finally, we have had two negative results in two cases of cerebral tumour, in three of epilepsy, in two cases of carbon monoxide poisoning and one of carbon bisulphide, in one light attack of sunstroke and in two of facial herpes.

II.

But beyond these facts confirming previous work, lumbar punctures practised in all doubtful cases have permitted us to study facts less known, and these have more particularly been the object of our researches. We speak of meningeal haemorrhages.

We withdrew a bloody fluid from fourteen patients by lumbar puncture; but it did not have the same signification in every case. We have in effect with Froin established an important difference between pure meningeal haemorrhages and cerebro-meningeal haemorrhages; the bloody exudation in the case being secondary to a deeper haemorrhagic focus of cerebral origin. There were ten such results in our observations the other form being tabulated as simple meningeal haemorrhage.

We do not wish to enter into details in regard to these cases, many of them having been already published and the rest will be included in the thesis by Froin. We wish only to insist upon the value of lumbar puncture, which proceeding alone has in a single year allowed us to diagnose four cases of haemorrhage meningitis. This malady simulates from a clinical standpoint very various affections. Thus in one case it appeared like diabetic coma. In another a cerebro-spinal meningitis. In a third the clinical picture was that of a uræmic attack. In this latter report an extraordinary localization of the coagulum was discovered, as it compressed the optic nerves and vessels which surrounded them, having thus produced a temporary blindness. Ch. Archard and Paiseau have recently reported an analogous case in which the meningeal haemorrhage was accompanied by paralysis of the third pair.

For one who has to do with cerebro-meningeal haemorrhages, the results furnished by lumbar punctures are frequently enough very useful for diagnosis. In certain cases of hemiplegia it is often difficult to say whether they result from a haemorrhagic focus or from a softening.

Now in every case where we had no trace of blood in the cerebro-spinal fluid during life, we found softening post mortem, so that we think that in the great majority of cases of cerebral haemorrhage there exists a destruction of nervous tissue sufficient to permit of the blood reaching the subarachnoid space. M. Froin in this monograph on meningeal haemorrhages has arrived at the same conclusion.

In the five cases of softening which we observed the fluid was normal four times and once only was there a slight lymphocytosis.

Lumbar puncture is of undoubted utility for the diagnosis of meningeal and cerebro-meningeal haemorrhages. But it has still another use: it is a therapeutic measure. It can to a certain extent lessen the effect of the increase in tension which result from the sudden rush of blood into the subarachnoid cavity. Also for those who have to treat meningeal haemorrhages it gives a more favorable prognosis. Our four patients recovered and we have already insisted, with M. Froin, that there are some of these types which are curable.

III.

Lumbar puncture has furnished us, furthermore, with very valuable results in particular cases, and in those requiring fine clinical interpretation.

Thus in the course of various infections—pneumonia, or typhoid fever accompanied by grave nervous symptoms—it has often shown the normal condition of the cerebro-spinal fluid, although the clinical manifestations might make one fear a bacterial invasion and not merely a simple toxæmia. In another case, on the contrary, of colon bacillus infection it showed us that the nervous system had been attacked; a young woman entered the hospital in an intense state of collapse with a profuse diarrhoea; the lumbar puncture gave a negative result. Suddenly a hemiplegia supervened and then the fluid was found to be full of polymorphonuclears and, at autopsy, a focus of necrosis, following suppuration from a septic embolus, was found in the central grey matter.

In many cases, certainly, the results furnished by puncture have not cleared up the diagnosis. In one patient among others, non-syphilitic, showing ocular manifestations—atrophy of the optic papilla, a secondary optic neuritis, and paralysis of the right external rectus—and, at the same time, characteristic signs of peripheral neuritis, with steppage gait, the presence of an abundant lymphocytosis could hardly serve to coördinate these symptoms. But these cases are interesting to make a note of, for

tudy of the patient, followed to recovery or the control furnished by an opsy, may explain the reason for these meningeal reactions which are the time difficult of explanation.

The duration of the meningeal reaction deserved to be carefully noted in the various cases. It is for this reason that we carried on as long as possible the exploratory punctures in the cases which we have followed, for in several we have been able to help in clearing up the pathological process.

In three of our meningeal haemorrhages we have noted the normal duration, eight months, ninety-one days, and forty days, after the beginning of the disease.

IV.

In a certain number of cases lumbar puncture has had most positive therapeutic effects; we do not dwell upon its value in the treatment of cerebro-spinal meningitis and, as a sedative in the course of a tuberculous meningitis and cerebral tumours, we have seen some remarkable exam-

Similarly, in a case of syphilitic meningitis we have seen an alleviation of the painful symptoms after each puncture. We have likewise been able to verify its beneficial action in a case of labyrinthine vertigo, characterized by subjective sounds with constant vertigo, subject to exacerbations. The patient had five of these attacks preceded by an aura referred to the ear. The removal of fifteen c.c. of cerebro-spinal fluid accomplished a great amelioration of the symptoms. The vertigo disappeared and the subjective sounds diminished greatly.

Another observation which clearly demonstrates the advantages of the operation is one seen in a young woman suffering from a chronic meningitis following diphtheria. On the second trial, lumbar puncture relieved the severe symptoms. The terrible headache which caused the patient to cry out, vomiting and dyspepsia, all disappeared.

Lastly, in a tuberculosis subject, suffering from a severe herpes cerebri and intense and persistent headache, puncture at once relieved the symptoms and caused them to disappear for a fortnight, when further punctures again relieved the condition. The patient used to come of his accord now and again for another operation when the pains returned.

V.

One can see by this brief catalogue of the results obtained in one's work at a hospital, the great diagnostic, prognostic and therapeutic value of this method. But is this operation without danger? It can be performed without risk? In the two hundred and twenty-three punctures, we have only observed a few slight headaches as a result. At times only the invalids had vomiting—two herpes, one syphilis.

One puncture performed laterally on a cachetic tabetic, blind and with a double pneumonia, resulted seriously. At the post mortem we were not surprised to find a diffuse bloody infiltration in the sacro-lumbar region. It is practically certain that the germs from the pneumonic process had settled in the region of the haematoma, produced by a badly directed needle which has slightly torn the tissues. This single accident might have been prevented and would have been prevented if, instead of making a lateral puncture, a median puncture had been performed, as in this case the needle would have avoided the vessels of the lumbo-sacral region. A small haemorrhage is not uncommonly found, at post mortem, when difficulty has been experienced in performing the operation; but, unless there is some septic trouble, no ill results follow; and, in the event of there being any sepsis, it is advisable to take the median route as being less dangerous.

With these precautions, lumbar puncture is a harmless proceeding, almost painless and capable of rendering inestimable services.

TREATMENT OF INTESTINAL AUTO-INTOXICATION.

Professor Combe, of Lausanne, treats of this subject in the *Archives de Medecine des Enfants*. Referring to treatment, the writer thinks that the only rational mode of procedure is by diet. Nitrogenous food should be diminished, and the intestine filled with carbohydrates. Farinaceous food is mainly indicated, supplement by milk. Milk has a strikingly antiputrescent effect in the bowel, an action which is also very markedly possessed by fresh cheese. Dr. Combe pins his faith to farinaceous foods. They are slowly absorbed, giving off lactic and succinic acids gradually. They should not be given in large amounts, but in small and frequently repeated meals the following general rules for the diet are recommended: 1. Not to drink with meals; and not to eat when drinking. 2. To divide the nourishment into numerous small meals, taking alternately a solid and liquid meal. 3. To rest lying down, either on the back or on the right side for an hour after each meal, but not to go to sleep. 4. To exclude from the diet all foods which are capable of acting as culture media for the proteolytic bacteria. 5. To avoid all meat that is "high" or apt to undergo fermentation. 6. If enteritis be present, to avoid all food which contains a large amount of cellulose. 7. In severe cases of auto-intoxication or enteritis, to give up meat entirely, and even milk at first. 8. To prefer, when possible, raw milk to boiled, and either to sterilized milk. 9. To take into the alimentary canal as much farinaceous food as possible.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

PHYSIOLOGICAL ACTION AND USES OF THE SALTS OF BARIUM.

In the *Medical Brief*, November number, Phillips of Aberdeen discusses the action and uses of this little known therapeutic agent. It is mentioned in the B. P. 1898, but only as a test; the dose is generally as one half to two grains, but this the writer regards as too high. Lives that from one-sixteenth to one-twelfth is enough, at least in with, the chloride, $\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$, being the salt used. This readily absorbed, is soluble and is a constituent of some natural waters.

Small doses of the chloride exert a stimulant effect on the stomach, increase the appetite and produce loose stools. Larger doses are irritant or caustic, with nausea, vomiting, purging and faintness. Minimum fatal dose is put at a drachm.

The nervous symptoms caused by toxic doses of barium compounds are clonic convulsions and motor paralysis, with impairment of excitability, fibrillary contraction and muscular cramps. From the respiration observed in cases of poisoning, it has been concluded that the vagi are paralyzed. According to Cyon, the lesion is central even in advanced poisoning the muscular irritability and the integrity of the peripheral nerves remain intact. Severe pains in the throbbing in the temples, giddiness, dimness of sight, double deafness and tinnitus have been experienced; also muscular especially in the legs.

The chief and most characteristic action of barium is on the heart and blood vessels.

The heart's action is at first stimulated, afterwards quickly and fully depressed by full doses of barium compounds, then, after palpitation, the pulse becomes irregular, feeble, or imperceptible, the surface cold and pale. Small doses raise blood pressure, while large doses cause a transient rise, succeeded by a fall, or from the first a fall, according to the dose given.

Reiger and Murrell have also pointed out the great similarity of the effect of barium compounds and of digitalis on the frog's heart: the

pulse is slowed, and the heart finally stops in systole; the blood-pressure is raised, probably from the direct action of the metal on the muscular tissues of the vessels; these actions take place independently of the nervous system. This is quite in accord with his own observations.

The chief therapeutic use of the metal is in the treatment of heart affections where it acts as a tonic. It is a substitute for digitalis and acts especially in cases of dilatation with mitral disease and cardiac dropsy. Da Costa praises it highly in restoring compensation and lessening cardiac pain, he gives it in pill, one-tenth of a grain, three times daily. Hare also advises its use in such cases.

SCABIES.

In the *Buffalo Medical Journal*, there is an article on the skin-lesions occurring from the acarus. The writer states that the descriptions of the lesions, as found in the books, will rarely answer for diagnosis as so many variations are seen and so many circumstances affect the typical lesion, the burrows or cuniculi being obscured by the dermatitis that followed the scratching. The positions that are favored are the fingers, hands, wrists, axillae, breasts in women, and penis in men, and, when multifiform, eczemoid lesions attended with nailmarks, indicating the severity of the pruritus, are found in these locations the diagnosis of scabies should be made at least tentatively and a course of treatment tried. It is comparatively difficult to find the parasite, of course its presence confirms the diagnosis.

In the treatment there are two essentials, first kill the parasites both in the skin and clothing, then to follow up the case long enough to be sure it is cured. Sherwell's washed sulphur treatment, rubbing the patient very thoroughly with the dry powder after a hot soap bath and spreading the powder on the lower bed sheet is cleanly and effective. The following ointments are recommended:—

Kaposi's ointment :

R	Naphthol	25 parts.
	Green soap	50 parts.
	Creta alba	10 parts.
	Benzoated lard	100 parts.

Stelwagon's Ointment :

R	Sublimed sulphur, balsam Peru, aa	℥j.
	Naphthol	℥ ½ to 1.
	Benzoated lard or } q.s., ad	℥ iv.
	Ung. petrolati	

CANADA LANCET.

S COLOR EXPLAINED.

of investigations of abnormal colored perspiration, Schmitt, has hit upon what he believes to be the cause of dark skin. The occurrence of the colored skin, that was studied by this scientist, is now in the daily press. In his endeavor to explain the coloration of the skin a ferment of the class known as a reducing-ferment capable of removing free oxygen. He finds also in the skin a color-melanin and which is analogous to the melanin known under the name of melanin. To translate this in the *Revue Scientifique*.

Experiments * * * obtained in the reduction of the melanin are more soluble than it and not precipitated in, are carried along with the perspiration and do not exert their action to alter them. When perspiration becomes abundant and then becomes the case, the melanin is no longer precipitated, it is precipitated outside abundantly by the oxidizing ferments.

To explain the pigmentation of the negro's skin under the action of solar rays the oxidizing ferments, whose action is to oxidize to the maximum the pigments of the skin by the abundant acid secretion of the skin, being energetically fixed, is permanent, in the case of the alkalies by the constant acidity of the case of Europeans, bronzed by exposure to the sun, while in the case of the negroes it is much less

only verifiable, for the acidity of the perspiration of the negroes be bleached by sufficient alkalization for whitening them, we have here at least a question that will enable us to solve the question. *The Literary Digest.*

S AND AUTOMATISM IN INEBRIETY.

Anti-Monthly, Nov. 11th, there is an article in which this subject is discussed and a number of cases during the past year, the question came up: Can an inebriate or a person under the influence of his surroundings, and of the

nature of his acts, and go on automatically giving no impression of his real condition? In other words, is it possible for an inebriate, not intoxicated in the general sense, to be unconscious of the nature and consequences of his acts. The writer gives a number of cases to prove that it is possible, although the courts and experts have shown a great reluctance to admit and a great ignorance of the published examples.

Dr. Crothers believes from his experience that the cases may be classified as follows: first, those in which the mind acted along accustomed lines of thought and action; second, those in which the mind displayed unusual ranges of thought and acts, quite different from the ordinary custom; third, those in which the criminal or homicidal impulse was prominent at this time. An example of the first is that of a conductor who, after drinking at night, frequently had no recollection of waking up in the morning and taking his train to its destination, asking the brakeman what had happened. Of the second, which is more uncommon than the others, is the man who after drinking for some time developed strong religious tendencies, visited clergymen, asked for the prayers of his friends, and then suddenly changed back to his old life, without remembering anything of what had passed and without, up to that time, arousing any suspicion of his sincerity. The third class consists of those guilty of criminal conduct, and injury to others. Here the question of responsibility is generally treated on the theory that inebriety is always voluntary and the claim of lack of consciousness is regarded with distrust, the same rules being applied as rule in insanity in general. The late Dr. Beard said that there existed consciousness at the time, and that memory of consciousness was not a necessary coexistent.

Dr. Crothers' own conclusion is as follows: —

(1.) Automatism in inebriety with loss of consciousness is not an uncommon condition, particularly in continuous drinkers. It is also seen in periodic cases as well as in epileptics, and is a distinct palsy of the brain.

(2.) All unusual acts or crimes committed by inebriates or hard drinkers should be studied, particularly when there is a possibility of loss of consciousness with alleged amnesia.

(3.) When this condition is established the person is both legally and practically irresponsible for his conduct during this period, and his mental condition is one of great gravity, requiring immediate care and attention. No theories of vice, wilfulness and moral causation should be considered by the physicians. It is a great question of facts and their meanings.

(4.) Cerebral automatism and loss of consciousness are pathological conditions, which must be studied from a scientific point of view to be understood.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division : Surgeon Toronto Western Hospital

STERILIZATION OF THE HANDS.

C. Ledham-Green, *Birmingham Med. Rec.*, June, 1904, says that even after the most prolonged and energetic washing of the hands in soap and hot water it is not possible materially to diminish the number of microbes on them; and this holds good whether sea sand, marble dust, or Schleich's soap is employed.

There is no advantage in unduly prolonging this washing process the hands never become sterile, and owing to the loosening of the epidermis generally appear more infected after than before washing. No advantage is offered by the use of soft soap, or soap containing an excess of free alkali. The water should be used as hot as can be borne and should be frequently renewed. After washing, the hands may with advantage be rubbed with a dry, rough, sterile cloth, to assist in the removal of the superficial cells of the epidermis. The use of turpentine, eucalyptine, or xylol during or after the washing with soap and water does not appreciably improve the results. The aqueous solutions of carbolic acid, lysol, perchloride, or biniodide of mercury are practically powerless to affect the microorganisms situated on the hands. The use of a saturated solution of permanganate of potassium followed by the application of strong oxalic acid (Kelly's method) gives wholly inadequate results. "Sublamin" cannot be compared in efficiency with the alcohol-bliminate method of Fürbringer, which it was introduced to supplant. The combination of an antiseptic like lysol or biniodide of mercury with soap does not increase the power of the antiseptic, but rather tends to lower it. Such soaps are practically valueless for the cleansing of the hands.

Alcohol possesses a remarkable power of sterilizing the hands, far surpassing that of all other agents. To obtain the full benefit of the spirit method, it is necessary to employ the alcohol for from four to five minutes. Spirit soap is greatly inferior to plain alcohol as a cleansing agent; and the addition of biniodide of mercury or lysol to this soap does not materially increase its value.

The power which alcohol possesses of sterilizing the hands is principally due to its property of hardening and fixing the superficial cells of the epidermis, in addition to which it has a marked bactericidal action.

Spirituous solutions of antiseptics are markedly superior to aqueous solutions, and the efficiency increases in direct ratio to the percentage of alcohol in the solution, up to about 70 per cent., when any further

increase in the proportion of alcohol causes a reduction in the sterilizing power of the antiseptics.

Of all the methods tested, the best results were obtained by the following modifications of Fürbringer's process:—

1. The hands are first scrubbed for five minutes with soap and very hot water (about 50 per cent.), the water to be frequently changed. The use of sterile sea sand, as an addition to the nail brush, is an advantage.

2. The hands are then rubbed for three minutes with methylated spirit.

3. Afterwards scrubbed for a minute or two with 70 per cent. sublimate alcohol (1 in 1000).

4. Finally, rubbed until dry and polished with a sterile cloth.

The writer advises the use of gloves, or the coating of the hands with a thin layer of hard paraffine when possible; and lays special stress on the importance of avoiding infection of the hands by handling septic material.

SKIN GRAFTING.

Wilcox, in the *Annals of Surgery* describes the procedure as follows:—

The night before operation, the granulating area and surrounding surface should be cleansed, as thoroughly as possible, with green soap and hydrogen peroxide. In case of very foul varicose ulcers, a compress, wet with 50 per cent. solution of hydrogen peroxide, may be applied for a few days previous to operation.

After thorough cleansing, the raw surface is covered with a compress saturated with a one per cent. solution of formaldehyde, the ordinary 40 per cent. pharmaceutical preparation being the unit and this compress is allowed to remain in place until the patient is on the operating table.

When the compress is removed, it will be found that the granulations are dry and dark red in color. This layer is about a quarter of an inch in depth and is pliable and can easily be scraped off with a sharp spoon from the underlying tissue, which is whitish and bleeds very little.

The removal of the granulation layer should be thorough and what little oozing there is, can easily be stopped by the application of the Esmarch solid rubber band for a few minutes. The use of the rubber is a valuable step in the operation, as the smooth rubber makes equable compression, and does not stick to the tissues when removed, but leaves an ideal surface for skin grafting.

The remainder of the operation is the ordinary one for the application of Thiersch grafts.

As a rule at the first dressing, three or four days after operation, the grafts are found adherent and in good order. The dressings should be renewed every two or three days until the healing process is complete.

EDEBOHLS' OPERATION IN NEPHRITIS.

In the *Maryland Medical Journal*, November, 1904, Duval Atkinson, of Baltimore, gives the following conclusions:—

1. So far as the results show, Edebohls' operation is applicable to only a very limited number of cases of medical nephritis.
2. In chronic interstitial nephritis, in late or contracted forms of parenchymatous and diffuse nephritis, the results do not warrant operative procedures.
3. Edebohls' theory of revascularization of kidney substance by desapsulation has not been proven.
4. The best results have been obtained in movable kidney with bunion and costs.
5. Benefit and actual cure have been obtained in acute and early stages of chronic parenchymatous nephritis, where pain is present and suppression of urine threatens the life of the patient.

GYNAECOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

THE ANATOMY AND FUNCTIONS OF THE UTERINE LIGAMENTS.

Dr. J. Riddle Goffe, Prof. of Gynaecology in New York Polyclinic, writing in the *American Journal of Obstetrics and Diseases of Women and Children* on the above subject, makes some very interesting observations:

He says in studying human anatomy, or anatomy of any animal species, we find that the principle Nature has applied to hold the various organs in place is that of suspension by ligaments. Briefly reviewing the organs of the human body, namely, the heart, the lungs, the liver, the spleen, the pancreas, the kidneys, the intestines, we readily admit that they, one and all, are hung by ligaments from the bony framework of the body. Not one of them is held in place, or receives support from anything placed underneath it. Even the heart and the lungs, that might easily be left to get their support from the diaphragm which is a convenient shelf running across beneath them, do not receive any sus-

aining power from that source, but are suspended by their ligaments. The ovaries and the fallopian tubes hang on the posterior face of the broad ligaments by their ligaments. Reasoning by analogy, and basing a conclusion upon the uniformity of Nature's laws, the logical inference is that the uterus is held in place by its ligaments, and, weight for weight, no other organ in the body has so many ligaments.

These ligaments, moreover, are compelled to support the uterus, as is clearly demonstrated by the fact that, when the supporting power of the floor of the pelvis is absolutely destroyed by the perineum being torn clear through into the rectum, the uterus remains in place. The only exceptions to this rule are found in cases in which the uterus is displaced and dragged down by complicating conditions that overcome the resisting power of the ligaments.

In speaking of the round ligaments, he says their chief action is suspensory, but rather to guide and limit the excursions of the fundus. In their quiescent state they hold the fundus to the front and thereby prevent the impingement of the intra-abdominal pressure upon the posterior surface of the uterus. With an over-full bladder the fundus is carried quite to the promontory of the sacrum and the intra-abdominal pressure is found to impinge upon the anterior surface of the uterus. The round ligaments prevent the uterus from being gradually crowded down into a permanent retro-displacement.

The main functions, the doctor says, of the broad ligament, are to furnish a support for the uterine appendages, which are hung upon its posterior face, and to furnish safe conduct to the blood vessels in their course to the uterus.

The writer next mentions the utero-sacral ligaments, whose chief purpose, if not the sole function, is to retain the uterus in its normal position. The two sets of ligaments—the utero-sacral and the utero-vesical—taken together, form a sling of tissue reaching from the promontory of the sacrum to the symphysis in which the uterus hangs suspended by their attachments just above the internal os. The utero-sacral ligaments prevent descent of the uterus as a whole, while the utero-vesical control the to and fro, or antero-posterior, motion.

THE GYNECOLOGICAL ASPECT OF MENTAL OVERSTRAIN AT PUBERTY, AND ITS INFLUENCE ON DEVELOPMENT.

In the *Boston Medical and Surgical Journal*, of September 15th, 1901, Wm. Edgar Darnall, of Atlantic City, N.J., has an article on the above subject. He says the period of puberty is the most critical time in the whole life of the female, because this time of rapid development of the

nd and body, may be the starting point for the physical perfection of manhood, or the first beginning of a physical wreck. The girl, at s period, is peculiarly susceptible to mental, moral and physical influences; and it is important, therefore, that her environment and tendencies should be studied with discreet carefulness.

He further remarks that the average pubescent girl is at school, and under the modern high pressure system of education, is straining every nerve to keep up with her duties. Her physical development is slighted, and what vitality she has is all used up in mental effort. The demand for rapid education is the curse of the age. From the ninth to the sixteenth year is the period of most rapid growth in height and weight, and sexual development begins. From now until the pubertal change is fully established, there may be manifestations of physical, emotional and intellectual turmoil, characterized by the various neuroses as hysteria, neurasthenia, epilepsy, anemias, neurasthenia, etc., etc. During this time, weight is actually lost by the lessening of the usual blood supply to the brain, which is diverted to nourish rapidly growing organs. The girl's brain is now easily fatigued, and what is acquired by a tired brain is soon lost, memory becomes impaired, vital force is required faster than it is generated; the work of to-day is done on to-morrow's credit, the system is unable to protect itself against disease and accident.

The writer points out how the physiologic processes of puberty make greater demands of the girl than they do of the boy; and, yet, in addition to performing the same work in school as her more rugged brother, parents are not only anxious that she shall excel in the regular studies, but that she shall also acquire accomplishments, such as music and painting, at an early age. Thus overworked, robbed of rest and exercise, she fails to develop physically into perfect womanhood. Visit a female college and note how the roseate blush has been changed to the ashy cheek; bright eyes dulled by brain fag, sweet temper changed into irritability, crossness and hysteria. The womanhood of our land is deteriorating physically and filling our hospitals with invalids, neurasthenics and sexual incompetents.

Continuing Dr. Darnall says the bane of the existence of the schoolgirl, worn out from her overwrought and overstimulated life, is dysmenorrhœa. Chapman thinks fully 75 per cent. who have reached the age of puberty would give a history of scant and painful menstruation. Gleason, in a tabulated list of 5,000 cases among schoolgirls, found 75 per cent. suffering from menstrual troubles. In 2,000 in New England schools, 75 per cent had menstrual troubles, and 90 per cent had dysmenorrhœa and ovarian neuralgias; 60 per cent. had to give up work one or two days in each month. The fact of pain being increased

with hours of intensity of study, with worry and emotion, and being diminished or ceasing entirely, without treatment of any kind, during vacation time, is a fitting commentary on the underlying causes. The doctor quotes Dr. Gill Wylie as saying, "The American horse receives, on the average, better treatment than the young woman of America from the time of early girlhood until the age of development has passed. The stock breeder never forces the young animal during the period of development, realizing that it is the time the greatest care should be taken.

Concluding, the writer says as preventive measures much can be done by restricting the studies during the establishment of puberty; and, if this cannot be done, by taking her from school altogether until menstruation is established. Especial attention should be paid to regulation of home habits—avoiding excitement, late hours, parties, and many other abominations of modern society. Childhood is the time for development and growth; and, as sleep is nature's great upbuilder and restorer, children should have an abundance of it. They should be instructed and watched regarding the daily evacuation of the bowels, and the frequent emptying of the bladder. The diet should be looked after, hurried eating and eating between meals absolutely forbidden, while plenty of outdoor exercise should be engaged in.

Not until teachers and parents remember that health is more important than knowledge; not until schools realize the futility of the forcing process of education, and guard the health of their girls by diminishing rather than increasing the work of the pubescent period; not until they appreciate more fully that a sound mind depends upon a sound body, can we hope to diminish the pitiable army of suffering neurotics and sexual incompetents, who so largely constitute the womanhood of the land, and who are to be the mothers of the men of our country.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal.

STATUS LYMPHATICUS, WITH REPORT OF CASES.

Robert A. Biechele, M. D., in *Arch. of Ped.* July, 1904, reports three cases of typical status Lymphaticus terminating in sudden death, which have recently come under his observation.

In his introductory paragraphs, he reviews the marked findings associated with this condition. The marked hypertrophy of the thymus gland, without any particular degeneration in any of its elements, is most important. Associated with this is a general hyperplasia of all the lymphatic structures of the body. The lymph nodes of the neck, axillae,

groins and popliteal spaces may be enlarged. Adenoids are constant and enlargement of the tonsils frequent. The mesenteric and retroperitoneal nodes are usually markedly enlarged. Peyer's patches are very distinct. The spleen is usually enlarged as a result of hyperplasia of its lymphoid tissue. The kidneys may present a state of cloudy swelling with some hæmorrhagic extravasation; while the liver may present evidence of fatty degeneration. The skin presents a peculiar pallor. A most characteristic condition is a marked hypoplasia of the heart and blood vessels, particularly of the aorta and its branches.

The author then reviews the theories advanced to explain the cause of the sudden death which usually terminates these cases. The pressure theory of Grawitz, while plausible, cannot be accepted, as usually the post mortem fails to reveal any evidence of pressure.

The author is inclined to accept the view advanced by Blumer, whose observations are in accord with those of Ohlmacher and Poltauf, as thus expressed:—

"We would suggest that individuals who are subjects of the status lymphaticus are born with an instability of the mechanism regulating auto-intoxication, at any rate so far as the lymphatic apparatus is concerned, so that they are subject to intermittent attacks of lympho-toxemia, which may lead to nervous phenomena of various kinds, or may cause death from cardiac paralysis."

While the grave type of the disease may be infrequent, the author is inclined to think that in every case of lymphatic hypertrophy there may be present the distinctive elements of the status lymphaticus. The desirability of diagnosis is evident in view of the fact that the most trivial injury, when complicated with this condition, may prove fatal.

The author's first case, unconfirmed by post-mortem examination, occurred in a female infant, aged eleven months. The symptoms were first observed at the age of six months. In the course of a slight attack of entero-colitis, she had an attack of thymus asthma and several slight convulsions. Rickets was well marked. That the thymus was enlarged, percussion over this region, with the child face downwards, made evident. There was enlargement of the tonsils, and adenoids were present. While sitting on a child's stool, the patient fell, striking the side of her face upon the floor. Convulsions followed immediately, lasting two hours. Then during three hours there was marked thymic asthma, followed by a short period of coma, then again convulsions till death ended the scene 22 hours after the trivial injury.

The second case was a male, age 22 months. Several members of the family were suffering from influenza, when the mother noticed that

the infant's temperature was elevated and typical mild influenza rapidly developed. On the second day, without premonitory symptoms, convulsions developed and continued for four hours until death supervened, thirty-five hours from the first symptom of influenza. A post-mortem revealed a thymus weighing 52 grains, enlargement of the bronchial lymph glands and of the spleen was present. The agminate glands of the ileum were very large and elevated, the mesenteric lymph glands were numerous and the size of large beans. The retroperitoneal glands were similarly enlarged. The histological examination showed a marked hyperplasia of all the lymphoid elements. There is no record as to there being any hypoplasia of the heart or blood vessels.

The third case was an infant of thirteen months, plump, happy and apparently well, except for periodic attacks of tonsillitis. Influenza developed and within 24 hours the child became convulsed and died during the third seizure. A complete post-mortem was refused but permission was given to examine the thymus which was found to be larger than in the previous case. There was present also enlarged tonsils, adenoids and an extensive hypertrophy of all the superficial glands. There was no evidence of rickets but the spleen could be readily palpated.

EXCLAMPSIA AND ITS TREATMENT.

Dr. Martin Stomar, in the *Cleveland Medical Journal*, Sept. 1904, opens his paper with a very satisfactory review of the recent literature dealing with the etiology of Exclampsia. After referring briefly to the older theories of Traube, Rosenstein and Bouchard, he dwells at length on the views advanced by Kaultenbach, Dienst and others that the convulsions are due to poisonous metabolic products of the foetus which overtax the eliminative capacity of the maternal organism. The exact nature of these toxins is at present unknown, but that they are probably albuminous bodies finds support in the cryoscopy of the blood. Dienst has found that the fibrin content of the blood in eclamptics is increased ten fold, and that this condition obtains to a less extent in the blood of the infants from these cases. The fibrin results from the action of thrombin upon fibrinogen, the thrombin being formed by the action of certain substances entering the blood and uniting with prothrombin which is derived, as we know, from the leucocytes. It is interesting, in this connection, to note that Dienst has in these cases observed a pronounced hyper-leucocytosis in the mother's blood.

A factor of some importance in the cause of eclampsia is that the foetal metabolic products are carried directly through the umbilical arteries to the placenta and, finally, into the hypogastric veins, vena cava

and general circulation of the mother. These foetal toxins act as a genuine blood poison and produce all those pathological changes generally found in other poisoning cases, such as cloudy swelling and fatty parenchymatous degeneration of the organs involved.

It is probable that these toxins have a distinct leucotactic tendency. The leucocytes so rapidly formed have probably less resistance, decay rapidly and may thus indirectly contribute to the formation of fibrin ferment and in that way to the extensive thrombosis so commonly found in the tissues of eclamptics.

Wiesner has advanced the view that these toxins irritate the vasoconstrictors and thus increase arterial pressure. This vascular spasm resulting in detachment of the endothelium of the intima, laceration of the small vessels and haemorrhagic exudations into the tissues would naturally result in coagulation necrosis, considering that at the same time the quantity of fibrin in the blood is increased. The oliguria and anuria associated with eclampsia can be explained by these conditions affecting the glomeruli of the kidneys.

With regard to treatment, the suggestion of Dienst seems to be of value. He claims that, with decrease of the alkalescence of the blood, the lower oxidation products of the metabolism increase; whereas, if the blood is in an alkaline state, the oxidised bodies appear as finer molecules and are more soluble; and, by thus increasing osmotic pressure, the excretion of urine is materially favored.

With this object in view, he claims to have derived benefit from a solution of bicarbonate of soda. This may be administered by mouth if the patient can drink, or by tube into the stomach and rectum if necessary.

For the treatment of convulsions, chloroform, chloral morphine, and hot baths are to be recommended. In the author's hands, venesection and prompt delivery have given the best results.

He considers that the general trend of opinion is in favor of prompt delivery, and considers in this connection the operation recently suggested by Dührssen under the name of vaginal Cæsarean section has distinct value.

He concludes his paper with the report of two cases in which he operated by this method with a satisfactory result in both. The first case, a multipara in the seventh month of pregnancy, had had seven convulsions when seen by him in consultation, and had been comatose for some hours. The cervix admitted the little finger. An incision about $\frac{1}{2}$ inches long was made in the middle line of the posterior lip of the cervix and a more shallow one in the anterior lip. Haemorrhage was not profuse. The hand was immediately introduced into the uterus and the

child turned and delivered without difficulty in six minutes from the beginning of the operation. The placenta was removed by Credé's method and the uterine cavity packed with iodoform gauze. The incision was stitched up with cat gut and the whole operation concluded in 25 minutes.

The second case, a primipara in the eighth month of pregnancy, had five convulsions when seen in consultation. As circumstances were unfavorable for operation, she was removed early next morning to hospital and there operated on after the eighth convulsion. No anæsthetic was employed as the patient was comatose. The anterior lip of the cervix was incised in the middle line for three inches, the bladder being pushed up out of the way. Then an incision $4\frac{1}{4}$ inches long was made in the posterior lip. The child was turned and delivered in about seven minutes. Haemorrhage was not severe. Four catgut sutures united the anterior incision and six the posterior. The albumin rapidly disappeared from the urine and recovery was uneventful.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

THE RESULTS OF THE IMPROPER TREATMENT OF SOME EYE AFFECTIONS.

G. W. Van Benschoten, in the *Providence Med. Jour.* of Nov. 1904, says, "That we learn more from our mistakes than from our successes is an old saying and certainly worthy of belief, as every medical man can testify, for in no case is a point either in diagnosis, prognosis or treatment so impressed upon us as when we are aware that an error has been made and we see wherein the fault lies. An unseen mistake however has no redeeming features, being valueless to the physician, and of course, detrimental to the patient's chances, while the same error may be repeated time and again. Medicine not being an exact science, and the human race far from infallible, mistakes are undoubtedly of frequent occurrence in medicine, as in all professions and means of a livelihood.

"It is to call attention to several diseases affecting the eyes, where mistakes in the diagnosis and treatment have been made, and so place others on their guard and prevent us from falling into the same error, that the following cases are reported."

Case 1, Mrs. C. S., gave a history of lachrymation, photophobia and pain for a week previous to visit. Examination showed the aqueous cloudy, pupil contracted, eye sensitive to touch and intensely congested, no treatment but home remedies. Vision was reduced to one quarter of the normal. Diagnosis, neglected iritis.

Case 2, Mrs. P. L.—, about three months previous to visit, had experienced severe pain, lachrymation and photophobia in right eye, fol-

wed by the same train of symptoms in right. Outside of home remedies and prayer, had had no treatment. After being under treatment for some weeks, enucleation was advised and performed in right eye. These two cases are examples of a fairly common condition, due to neglected treatment. If proper treatment had been instituted early in the disease, the chances are they would have recovered with good vision. No one was to blame but the patients themselves.

Case 3, Mr. F. C.—, gave a history of having been hit in the eye by a foreign body, while grinding a plow share, several days before coming to consult the doctor. There was pain, lachrymation and photophobia. He had consulted a physician who had told him he had a "cold of the eye", and had given him a wash. Examination of the eye showed intense inflammation, pupil small and aqueous cloudy. Inspection showed a foreign body imbedded in the cornea. Under vigorous treatment of diagnosis on the part of the physician.

Case 4, a colored woman, stated that she had redness of the eye, pain, lachrymation and loss of vision for several weeks. She had consulted an "eye specialist", or pseudo-medical-optician, who gave her ointments and eye drops. This woman had a suppurating ulcer of the cornea with severe iritis.

Case 5, Mrs. C—, brought her baby to see what could be done by way of removing "the white spots from her eyes". When she was born, the attending physician noticed some discharge and had prescribed for it, but had not called to see it since. Examination showed a large leucoma over the centre of both corneae. Diagnosis, neglected ophthalmia neonatorum. This case is reported to impress the importance of careful attention when there is any discharge from an infant's eyes. Ophthalmia neonatorum causes forty per cent. of all the blindness in the world. No measures for its prevention and cure should be neglected.

Case 6 was one of glaucoma, mistaken by a physician for iritis and treated as such. After iridectomy and other treatment, the vision was counting fingers in the right and partial restoration in the left. Too much care cannot be taken in the differential diagnosis of glaucoma and iritis.

Case 7 was exactly the opposite. A physician mistook iritis for glaucoma and used eserine instead of atropine.

Case 8 was one of ulceration of the cornea in which the attending physician had instilled acetate of lead solution which had deposited on the ulcer. The central vision was almost totally lost.

Case 9 was a binocular squint which had been neglected until the patient was 26 years of age, and binocular vision was lost from non-use. It cannot be too strongly insisted upon that these cases should be operated on early.

THE OPERATIVE TREATMENT OF STRABISMUS.

Wendell Reber, Philadelphia, *Penn. Med. Journal* June, 1904, believes that in cases of squint which do not yield to optical and orthopedic treatment, the following considerations should be carefully weighed before resorting to operation: 1 Hereditary influence; 2 refractive condition; 3 degree of deviation; 4 age; 5 visual acuity; status of fusion faculty; 6 outward swing of visual axis.

Reber discusses the advisability of doing a tenotomy, an advancement or both in a given case, and gives the following indications for tenotomy and advancement in adults:—

1. In monocular convergent strabismus, the advancement of the external rectus of the squinting eye if of moderate degree; combined with tenotomy of the internal rectus of the same eye if of high degree.

2. In binocular or alternating convergent strabismus advancement of both external recti if of moderate degree. In rare cases it must be combined with tenotomy of both internal recti.

3. In monocular divergent strabismus, advancement of the internal rectus and the accompanying structures, along with tenotomy of the external rectus.

4. Binocular divergent strabismus, advancement of both internal recti, and, if necessary, tenotomy of both external recti later.

5. If there is a plainly manifest upward or downward diviation of either eye, correction of such deviation by tenotomy should always precede, by a week or two, any surgery directed to the lateral muscles.

THE USE AND ABUSE OF LACHRYMAL PROBES.

Dr. George F. Suker, at the Denver meeting of the American Academy of Ophthalmology and Oto-Laryngology, Aug., 1904, read a paper on this subject, and reached the following conclusions:—That very large probes give undue pain, are liable to produce destruction of the lining membrane of the canal, are apt to produce an unduly large lachrymo-nasal canal and thus invite infection from the nose, or cause annoying influx of air into the canal on blowing the nose. They necessitate over-slitting of the canaliculus and may produce obliteration of the canalicular or nasal opening of the sac. Hemorrhages are caused in the sac and canal which are liable to become organized clots, which produce fresh strictures. The very large size of the canal is no advantage in the carrying off of the tears. Suker says the use of very large lachrymal probes is bad surgery, and advocates the infrequent use of probes of moderate size. (The editor of this department of the *Lancet* heartily agrees with

slow, steady progress. The importance of free nasal respiration is fully set forth, as well as the fact that a chronic inflammatory condition of the laryngeal mucosa may be caused by, or at least kept up by, suppurative conditions within the nose. Chronic bronchitis, emphysema, partly compensated valvular lesions, and progressive myocarditis may be responsible for a congestive state of the larynx which favors the appearance of persistent lesions of chronic inflammation. Functional overuse of the voice, alcohol, smoking, gout, rheumatism and irritating dust bear each a tendency, in some cases, to light up or start an attack. The treatment advocated is as follows:—

(1). Inhalation of steam or liquid sprays: For this purpose inhalers and atomizers are used. Atomizers throwing vapor into the throat are the only ones to employ in the treatment of chronic laryngitis. (The reviewer is forced to say that patients accomplish very little good by using the ordinary hand bulb atomizer, as very little of the medicine reaches the larynx. Intra-laryngeal sprays with compressed air, used by the physician himself, are much to be preferred). The best inhalants are the balsams, as balsam of Peru and benzoin, and certain oils, as eucalyptus, oil of pine with menthol. An alcoholic solution is prepared and added to water in the proportion of a teaspoonful to a glass of water. Rualt often prescribes tinct. eucalyptus, 60; tinct. benzoin, 60; oil of pine, 2; menthol, 4. The oils of myrtle, sandal wood, citron, and origanum may be used, the latter only in small doses because of its irritating properties. For atomization, only aqueous solutions of substances soluble in water should be prescribed. (Atomizers throwing oil, finely divided, would seem to be more liable to reach the larynx.) Solutions of tannin, sulphate of copper and sulphate of zinc, one-fifth per cent., are of service, as astringents. As an antiseptic, the solution of choice is one of pure carbolic acid in .25, .50, or .75 per cent strength.

(2). Instillation by Laryngo-tracheal Injection.—The author is somewhat non-committal regarding this very valuable method. He prefers sterile olive oil, as the best excipient, to which may be added menthol one third per cent., or oil of eucalyptus two-sixth per cent. When the trachea is also involved, this method is the ideal one.

(3). Topical Application: According to the case the application may be made simply by contact or by friction. The useful applications are either the astringent or mildly caustic applications, or antiseptic solutions. Among these silver nitrate is the most commonly employed. Rualt has long since substituted for it chloride of zinc, weak solutions, 1 to 4 per cent., being the most useful. Sulphate of zinc and tannin act better in some cases. As a topical antiseptic, Rualt prefers phenol sulphuricinate, 10 to 30 per cent. Iodine combined with potassium iodide is also of value occasionally, scarification, curettage, chemical or thermic

cauterization may have to be employed. In all forms, attention to the general health and proper mode of living is essential. Before any line of treatment is decided upon, the condition of the upper respiratory tract must be most carefully investigated, for here is most commonly found the underlying cause of the disease situated lower down.

THE NASAL TREATMENT OF NON-SUPPURATIVE DISEASE OF THE MIDDLE EAR.

At the last meeting of the British Medical Association, Dr. Thomas Barr, in his address introducing the subject of treatment of non-suppurative disease of the middle ear, spoke as follows with reference to the nasal treatment of these cases. *Jour. Laryngology*: The propriety of operative nasal treatment in those forms of middle-ear disease has given rise to very pronounced divergence of opinion, and may almost be regarded as a burning question in our specialty. Most of us probably approve of operating upon, or otherwise removing, marked obstructions in the nasal channels. There can be no doubt that such obstructions exercise an injurious influence upon the tympano-Eustachian apparatus, first by the effect of suction during the act of swallowing; and, second, by inducing persistent or recurrent swellings of the Eustachian tube. Hence we are pretty well agreed as to the propriety of operative or other treatment for the removal of marked hypertrophies in the nasal passages, such as enlargement of the inferior turbinated body, or very pronounced septal ridges, or deflections causing considerable stenosis. Also when post-nasal adenoids exist, most of us would approve of operating without, however, expecting such brilliant results as in the case of the exudative catarrhs. Fortunately, the dry forms of middle ear deafness are comparatively uncommon in childhood. On the other hand, the existence of a small spur or knob on the septum, interfering very little or none at all with nasal breathing, and producing no special tendency to catarrhal attacks, may wisely be ignored. It is to be remembered that intra-nasal operations occasionally seem to aggravate the deafness perhaps through nervous shock, or from the entrance of blood through the Eustachian tube. There is probably unanimity as to the propriety of treating post-nasal catarrhs by the recognised methods, although it is not to be forgotten that these methods, such as the use of the nasal douche, may, in the absence of careful precautions be productive of much harm."

PROVINCE OF QUEBEC NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Windsor Mills.

The Montreal Civic Hospital for contagious diseases is again occupying the attention of the aldermen. It was thought that a solution of the difficulty had been found when in March 1903, the city agreed to support two hospitals, one for Catholics and one for Protestants, provided that the governors erected the buildings by Jan. 1905. The Roman Catholics have fulfilled their part of the contract, by adding to the proposed new Notre Dame Hospital, a building for contagious diseases. The Protestants, on the other hand, attempted to buy land for their hospital within city limits, but they met with such opposition from the owners of adjacent property that they were unable to obtain the rite until it was too late in the season to begin building operations. The Civic Hygiene Committee, having enquired into the matter, extended the contract period until Sept. 1905, seeing that \$90,000 had been expended upon the ground upon which the institution was to be built, and that there was every prospect of the work being pushed.

A very serious obstacle has proved to be the lack of funds, and a public meeting was called in order to put the question before the community. The chair was taken by Dr. Roddick who made an earnest appeal for funds. He stated that about six months ago the matter had been urged by the press, and some \$36,000 collected, an amount of course utterly inadequate. Mr. Ross then spoke upon the necessity of a hospital for contagious diseases and added point to his remarks by subscribing \$25,000. Several other subscriptions, varying from \$500 to \$1,000 were taken up at the same meeting, and committees were elected to bring this part of the plan to the individual attention of the Protestants.

At the sixtieth annual meeting of the Montreal Maternity Hospital it was announced that with \$15,000 more the new hospital which is in course of erection, would be free from debt. The gift of \$40,000, by Sir. Wm. McDonald, has enabled the management to present this very satisfactory report. The arrangement entered into last December with the Royal Victoria and General Hospitals had proved most satisfactory. Undergraduate nurses from these institutions now take a three months' course of training in obstetrical work at the Maternity Hospital and pass oral and written examinations before leaving.

Since December, twenty nurses had been received from the two hospitals. During the year there had been a total increase of ninety-five in the number of patients treated, there being three hundred and fifty-three

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The work of the League was brought before the Council in 1899. It was then decided to send a committee to visit the League and to report on its work. The committee was composed of Dr. J. B. Clark, Dr. J. B. Clark, and Dr. J. B. Clark. They found that the League was doing a great deal of good work, and they recommended that the Council should give it a grant of £100 a year. This was done, and the League has since then been able to do a great deal of good work.

Dr. J. B. Clark, whose duties are principally in connection with the dispensary, said that since November 1899 they had examined and treated a large number of patients. The dispensary was a necessary adjunct to the other branches of the society, but unfortunately it required the lion's share of the funds. This was of necessity the case, for not only must medicine be supplied, but also food and clothing for the destitute. The greatest difficulty encountered had been the absence of places of refuge where early and hopeful cases might be successfully treated, and where advanced cases might be placed.

Some interesting light is thrown upon the heavy infantile mortality of the city when it is stated that, during 1902, there were 248 deaths of children under five years of age from meningitis, and that fully 75 of these were tubercular in origin; enquiry also proved that adults suffering from consumption had been living in the houses either at the same time or shortly before.

Dr. Williams reported briefly upon the work being done in Sherbrooke.

Dr. Hutchinson, the Medical Officer of Westmount, had warned the householders of that town against the possible repetition of what occurred last year, an outbreak of typhoid fever, owing to contamination of the water supply. The municipal engineer has reported that the ice formations on the river are assuming the same aspect as they did last year, when the sewage of Verdum was diverted into the intake of the Westmount water supply. The water company has recognized the danger and are improving the channel by means of sand bags, but Dr. Hutchinson advises the boiling of all drinking water.

The Montreal Health Officer is impressing upon the Health committee the great necessity of notifying the public to promptly call in a physician when children contract bad sore throats, as in the initial stage diphtheria is frequently looked upon as a trivial matter and is thus neglected. Dr. Laberge states that the greatest cause of deaths from diphtheria is the tardy recognition of the gravity of the malady. It is expected that the Health Committee will issue a circular to parents, in regard to the disease and its treatment.

The sum of \$6,500 was recently presented to the management of the Childrens' Memorial Hospital in the name of the school children of Montreal. The money was raised by means of a bazar which was conducted by the pupils of the Montreal Schools.

At the regular meetings of the Montreal Medico-Chirurgical Society the following papers were presented. Dr. Gillies, congenital abscess of one kidney; case reports by Dr. R. P. Campbell, anthrax; by Drs. Martin & Hardisty (1) early renal tuberculosis with calculus, (2) cancer of stomach with sudden death. A discussion followed on actinomycosis by Drs. Bell, Keenan, McEachran, Chipman, Adami and Hamilton.

At the Quarterly meeting of the Board of Governors of the Montreal General Hospital, Dr. Campbell reported that for the three months there were 829 patients treated to a conclusion, with 57 deaths, 21 of which occurred within three days of admission making the mortality for ordinary cases 4.3 per cent. In the outdoor department there were 10,235 consultations and 375 ambulance calls. Owing to the great increase of surgical work it had been necessary to appoint a permanent assistant to

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Tedford in the operating room. In the out-door department two rooms were now completed and ready for use.

The 34th Annual dinner of the Faculty of Medicine of Bishop's College was held on Dec. 8th, in the Place Viger Hotel. The function was very successful and was spoken of as one of the most enjoyable in the history of the college. Mr. G. W. Gellatly, '05, presided, and the guests of honour were: Chancellor Hamilton, Dr. England, Dr. A. E. Lee, Dr. Armstrong, Dr. Perrigo, and Dr. McConnell.

The chairman proposed the health of the King, following which Dr. Burnett proposed the Alma Mater. Dr. Hamilton, in replying, noted the absence of Dr. Campbell and Dr. Whitney. He thought Bishop's College had long enough suffered from self effacement and McGill loomed large in the public eye. He thought the undergraduates should advertise the College more and to better advantage.

Dr. Melik Vartanian proposed Sister Universities, and delegates from Toronto, Queens, Laval and McGill, replied. Our guests were proposed by Dr. Hackett and responded to by Drs. Buller and Armstrong of Montreal.

OYSTER AS A POSSIBLE AGENT IN THE TRANSMISSION OF TYPHOID FEVER.

In the *Medical Review of Reviews*, September 25th, Bensen, Assistant Sanitary Superintendent of New York, discusses the conditions surrounding the oyster fields from which the chief American supply is obtained, and the dangers that may arise in connection with them. The important oyster fisheries are carried on from small towns situated on the banks of streams that drain directly into the sea in the mouth of the beds, and along these streams are built the houses of the fishermen with the drainage from their houses and from their primitive oyster sheds passing directly into the water. On the banks, too, are situated the sheds in which the oysters are spread out to "fatten." These are covered, at high water, by the water from these streams which is much less salt than the sea water from which they have come, and both before and after being caught they are exposed to all possible sources of contamination. The description is accompanied by several illustrations showing the features described.

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EDITORIAL

THE FUNCTION OF THE CÆCUM AND APPENDIX.

Of recent years a great deal has been written and spoken upon the cæcum and appendix and the opinion has often been expressed and is freely entertained by many that in the human subject these portions of the digestive canal are of no use, and are merely the degenerated remains of lower orders of animal life, in which they are important digestive organs. Sir William Macewen, of Glasgow, the eminent surgeon, chose these organs for the Huxley Lecture which he delivered a few weeks ago at Charing Cross Hospital.

Sir William Macewen is far from concurring in the teaching of many that the cæcum and appendix are little or not use in man. "One sees that the digestion in carnivorous birds and animals takes place principally in the stomach and small intestine, the cæca being rudimentary or absent; while in the herbivora the caecum is enormously developed, and in the horse the cæcum is the chief digestive organ, the stomach occupying a secondary place. Man, if not an omniverous animal, is at least a carnivorous and herbivorous one; therefore, by analogy, one would expect man to possess not only a stomach and small intestine, but also a cæcum—just as he has."

In proof of his statement that the cæcum and appendix in man are important digestive organs he mentions the fact that when the caecum has been removed the persons fall into poor health and lose flesh, and suffer from a very troublesome form of diarrhœa, alternating with constipation. When an artificial opening occurs in the caecum through which chyme and intestinal juice escapes, the person loses health; but when the opening is in the lower portion of the descending colon or in the sigmoid flexure, no such result is met with. In such cases there is very strong and positive evidence that the caecum is an important portion of the digestive system; and it may be taken that, so far as the caecum is concerned, Sir William Macewen has succeeded in proving his case.

Turning to the appendix, the distinguished lecturer also makes out a strong case in favor of its having a useful purpose in the human economy, and that it is not merely a useless vestigial remnant. He points out

the facts that it has an abundant blood supply, that it is richly filled with Lieberkühn's glands, and that as the chyme passes through the ileo-caecal valve it passes over the opening of the appendix and is thus mixed with any juice that may come from it. He expresses the opinion that an organ the size of the appendix may secrete a very material amount of digestive fluid. The anatomy and histology of the organ favors this view.

He goes on to show that its nerve supply and control is the same as for the small intestine. He also mentions the fact that the vast majority of cases of appendicitis is caused by errors in diet or trouble with the digestive organs of the dyspeptic type. These are the factors that lay the foundation for appendicitis in almost every case and enable the micro-organisms to cause such harm.

The lecturer concludes with the words, "For many years I have believed that the human caecum and appendix are of value in digestion. The facts pointing in that direction have accumulated slowly, and are not all yet garnered; many require still to be investigated. Let us sit down before facts as a child, be prepared to give up every preconceived notion, and to follow humbly wherever nature may lead."

THE TREATMENT OF GASTRIC ULCER.

From an article by Lauder Brunton we abstract the following views:—

The treatment of gastric ulcer is very largely a question of proper diet. The patient should be put in bed, and fed per rectum for some days. The time that this method of feeding should be continued depends upon the severity of the case.

Milk is the usual food to begin the stomach feeding with. But this must be given with great care at first. Milk can form bulky, hard curds that are capable of causing much irritation, or even producing relapses. One ounce of an equal mixture of milk and lime water every two hours is sufficient to begin with, in addition to the rectal feeding. The quantity is gradually increased, and the lime water, barley water, or soda water, with which the milk is being diluted, is steadily reduced as the stomach can bear the less diluted milk.

All indigestible, and rough foods should be strictly withheld. The small seeds of fruits are very injurious and irritating. Such articles as raspberries, strawberries, gooseberries and tomatoes are not suited for cases of ulcer of the stomach. The juices of these can be obtained free from the seeds, with a little effort in passing them through a fine sieve.

Meats and vegetables require the same care in their preparation for

these patients. All fibre matter must be removed. The vegetable pulp and the meat juice are alone eligible for the stomachs of those suffering from gastric ulcer. Meat fibre and vegetable cellulose may form large accumulations in the stomach, and do much harm. These fibres of meat, or vegetables, may become rolled up into balls of considerable size and hence one can see the reason for care in the case of such patients.

Albumin water and soft custard are suitable for these patients. They are both nourishing and non-irritating. Shredded fish may also be allowed in small amounts; but the utmost care must be exercised to remove all bones. A small piece of fish, or meat, bone might readily cause a relapse, a hemorrhage, or a perforation.

Any bread that is given the patient must be of the best quality and stale. New bread forms in mastication a doughy mass which the gastric juice has but little power to penetrate and digest. This is also true of cheese.

In addition to the milk and lime water, thoroughly cooked chocolate is an excellent beverage.

Too much attention cannot be paid the subject of mastication. When the food is thoroughly masticated, it is mixed much more freely with the gastric juice; and the process of digestion, to this extent, is facilitated.

A carelessly eaten meal may cause a relapse, or retard the recovery by many weeks. With proper rest and dietetic management, these cases recover in from four to eight weeks.

THE STATUS LYMPHATICUS.

In 1842, Rokitsky recognized and described a condition of ill health that accompanies enlargement of the thymus gland. This condition was often confused with tuberculosis of the lymphatic system or scrofula. The thymus gland should begin to undergo involution at birth, and should have disappeared by puberty. In some cases, however, it increases in size until adult life. Along with this thymus enlargement there is hyperplasia of the superficial and deep lymphatic glands, especially those of the neck, axilla, groin and abdomen. There is a lymphoid infiltration in many organs, such as the kidneys and arteries. This lymphoid infiltration of the arteries may be so extensive as to cause distinct narrowing of their calibres a condition described by Virchow as chloro-anæmia of lymphatic origin with constriction of the aorta.

Rickets and the status lymphaticus are closely related to each other, as almost every case of the condition shows evidences of rickets. An additional proof of the connection is found in the fact that rickets is usually

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enefited by the administration of thymus gland. Laryngismus
lus and convulsions may arise from disease in the thymus gland, or
ondition of it which causes the status lymphaticus.

n status lymphaticus sudden death is liable to occur during or after an
tion. These patients bear anæsthesia badly. Sudden death may
ccur in an attack of thymic laryngismus stridulus. Persons suffering
status lymphaticus are liable to sudden death on very slight shock,
as bathing or receiving a hypodermic injection.

he diagnosis is usually made on an increased area of dulness over
ymus gland, the presence of rickets, enlargement of the neck, axil-
nguinal and abdominal glands, and the presence of noso-pharyngeal
ids.

Vith regard to treatment it may be necessary to remove a portion of
ymus gland and fasten the remainder so as to relieve pressure and
any dyspepsia that may exist. In some instances, though the
is too large, there may be a defective amount of thymus gland ex-
n, and the exhibition of the gland is useful. In some cases with
er production of the active principle of the gland, benefit has been
d from adrenalin taken internally. Adenoids, of course, should be
ed and this has been of great service in some cases.

THE SURGICAL TREATMENT OF BRIGHT'S DISEASE.

he chronic forms of Bright's disease are very fatal, consequently,
ethod of treatment which promises better results than those of the
will be welcomed by the profession everywhere. If a disease with
high mortality can be cured by an operation of comparatively easy
ion, a great advance has certainly been made.

wo surgeons of high standing claim priority in the announcing of
rgical treatment Bright's disease to the medical profession. One
se is Dr. G. M. Edebohls, of New York, and the other is Dr. A.
rguson, of Chicago. It is not our intention to deal with this as-
f the subject at present.

takes considerable time to sift the wheat from the chaff in such a
lure as the surgical treatment of such a condition as chronic Bright's
e. With the view of bringing his experience to light, Dr. Edebohls
llected his papers and tabulated the results of his seventy-two cases
ook which has been quite recently issued. One turns naturally to
ook for information.

he interesting portion of the record centres around the cases which
aimed as cured. These are seventeen in number. Ten of these
ated to have been chronic interstitial nephritis, or what is often

known as granular kidney, or chronic renal cirrhosis. Three are given as being examples of chronic diffuse nephritis. Three are mentioned as chronic parenchymatous. We must confess to some difficulty in understanding why these two latter groups are separated, as the views of leading authorities consider chronic parenchymatous and chronic diffuse nephritis as one and the same thing. One of the seventeen cured cases is set down as an instance of right chronic interstitial and left chronic diffuse. We had thought the etiology and pathology of these conditions were so different that they could not occur in the same person.

Of the seventeen cases, sixteen are females. Among these sixteen females the entire ten instances of the interstitial form are found. This is most remarkable, as the usual experience is to find at least two cases among males to one among females. The only case given as in a male is the composite one of right chronic interstitial and left chronic diffuse.

The ages of the cases are 18, 25, 20, 30, 45, 22, 19, 31, 33, 39, 44, 34, 36, 27, 36, 23 and 38 years. The solitary case in a male was 36. This is a decidedly young average for a series of cases of interstitial nephritis or granular kidney, especially when all the examples of this type occur in the female subject. The great majority of cases of cirrhosis of the kidney are met with in persons over 40 years of age, the disease generally appearing between 40 and 60.

Of the seventeen cases claimed as cured, sixteen are females. It is well known that in women the kidneys may reveal post mortem changes that did not cause any symptoms of Bright's disease during life. There may have been some nephritis of pregnancy, or the kidneys may have been more or less movable with thickish capsule. Such cases should not be called interstitial nephritis.

Let us now take up the ten cases of interstitial nephritis reported as cured. No. 1 presented "pallor and puffiness of the face, slight œdema of the extremities, and moderate cardiac hypertrophy, the presence of albumin, hyaline, granular and epitheliated casts, lowered specific gravity and urea per cent. The right kidney was movable and was the only one operated upon." No. 4 is described thus, "Complexion flabby and doughy; feet slightly œdematous. Marked accentuation of all heart sounds. Both kidneys prolapsed." No. 6 had, "Marked pallor and puffiness of face, slight swelling of ankles. Heart sounds strong; no murmur. Decided arterial tension. Right and left kidneys movable. Albumin present." No. 7 was "Pale, anæmic, and slightly puffy about the face and ankles. Heart sounds normal. High-tension pulse. Both kidneys prolapsed. Chronic appendicitis. Albumin and casts." No. 8 had "Pallor and extreme emaciation and feebleness. No œdema. Heart normal. Slight arteriosclerosis. Both kidneys movable and albumin and casts. Chronic appendicitis." No. 12 revealed "Loud sys-

toxic bruit over left ventricle; augmented arterial tension. Albumin and casts. Both kidneys movable." No. 13, "Heart sounds good; increased arterial tension. Both kidneys movable. Albumin and casts." No. 15, "Patient pale and emaciated. Slight œdema of ankles. Heart sounds normal; moderately increased arterial tension. Both kidneys movable. Chronic appendicitis. Pregnant. Tumour of left ovary. Albumin and casts." No. 23, "A frail, nervous, little woman, pale and careworn. Lower extremities moderately œdematous. Decided cardiac hypertrophy, with mitral regurgitant murmur. General arteriosclerosis. Right kidney movable. Albumin and casts." No. 55, "Slight puffiness of eyelids; otherwise no œdema. Heart normal; arteries a little hard. Both kidneys movable. Chronic appendicitis. Albumin and casts."

In the above ten cases, all females, we utterly fail to see any evidence to justify the diagnosis of interstitial nephritis in any one of them, much less in all the ten. Dr. Edebohl's work, therefore, in our judgment, falls far short of being convincing in this form of Bright's disease.

HALLUCINATIONS.

Long ago, Esquirol taught that hallucinations were central in origin and projected outward. This view made hallucinations a question of ideas or memory images. This definition has found favor with many eminent alienists, such as Tuke, Kellog, Krant-Ebing, etc.

But to this view there began to be dissenting voices. An idea or a memory image is not a sensation; a hallucination is clearly a sensation, if it is anything. Further, sensations are not carried centrifugally. They must be conveyed inward or centripetally; and it is only the thought of them that can be referred to the external world, from whence sensations come.

This lays the foundation for the more recent and accurate views of the pathogenesis of hallucinations. They are sensations and must arise in sensory nerves, being transmitted from the place of origin to some perceptive centre. It will at once appear from this that hallucinations of hearing, are due to some morbid condition of the auditory nerve, or the structures in connection with it. In like manner, the other sensory organs may be affected.

Sensations so originated may be wrongly interpreted by a diseased brain, or sensory perceptive centre. Thus, a ringing in the ear may be regarded as a voice, and in turn, as the voice of an enemy. Here we have a sound, caused by some abnormal state of the auditory apparatus, passing centripetally to the brain, there being regarded as something

quite different from what it really is, and, finally, being projected outward according to well-known physiological laws.

For the production of hallucinations there must be the sensory elements and a false interpretation of these through some central derangement. The mental condition in hallucinations and illusions are the same; but the sensuous conditions differ in that in the former the sensation arises in the sense organ itself; whereas, in the case of illusions, there is some external object acting upon the sense organ, and not a mere state of them.

There must be a certain mental derangement. Many persons suffer with tinnitus aurium who are not the victims of hallucinations. When, however, the brain is diseased, as well as a morbid state of the auditory mechanism, the tinnitus may become voices, or other specialized sounds. It is thus clear that hallucinations arise in the sensory organs, the impressions are conveyed inwards to the brain, and thence projected outward to the external world. Along with the above views of Bechterew, must be stated those of Sir W. R. Gowers, who holds very firmly to the opinion that in subjective sensations of light and sound the cerebral cortex plays a very important part. He holds that the character of labyrinthine sounds is to a large extent influenced by the cerebral centre. In other words, that derangement of the special senses will not give rise to true hallucinations, unless there be also some accompanying derangement of the cortex.

MEDICAL PRACTICE IN CHINA.

The Chinese claim great antiquity for the system of medicine, which is founded on the belief that disease is caused by evil spirits, and, as a last resort, may be cured by exorcism. There has, as a consequence, grown up in the Chinese practice of medicine a vast amount of fraud. In the midst of all this, however, there is a certain knowledge of the uses of some of the native drugs, the cautery and counter irritation.

The Chinese have some very ancient works on medicine, some of which are said to have been written before the beginning of the Christian era. A work was written on the pulse in the third century, and a commentary on some questions of a difficult nature about the same date. Prior to the fourteenth century, works of a most voluminous character were compiled on diseases of women; of the eye, of the vessels, of the intestines, on fevers, wounds, amputations, and midwifery. About the fifteenth or sixteenth centuries there were written several most elaborate treatises. One of these, on general medicine, contained a hundred and sixty volumes, another set of over fifty volumes on drugs, and a third on fevers, children's diseases, women's diseases, etc., of one hundred and

twenty volumes. With all our modern systems and encyclopedias, we are not more burdened than the ancient Chinese doctor. Of more recent date there are some ponderous collections of writings on every possible topic. Running through all the Chinese writings on medical subjects there is an utter absence of any desire for investigation or a search for truth. That which is most mysterious or least known is most praised and valued.

There is no knowledge in Chinese medicine of anatomy, physiology, or chemistry. Man is supposed to be made of five elements, namely fire, water, metal, wood and earth. There are various senses and viscera. There are mysterious powers that govern these. Disease is regarded as some derangement in these elements and powers.

The foundation of all diagnosis in Chinese medicine rests on a knowledge of the pulse, of which there are twelve kinds, six on each side, three above and three below each wrist. Though this is the case, the Chinese have no knowledge of the circulation, nor do they make any distinction between the veins and the arteries. The Chinese feel great contempt for the foreign doctor who feels the pulse on only one side. The following words of Mrs. J. F. Bishop, F.R.G.S., in a recent issue of the *Buffalo Medical Journal*, is very interesting:—

"Each season of the year has its proper pulse. In the first and second moons the pulse of the liver, answering to wood is 'long and tremulous'; in the fourth and fifth the pulse of the heart corresponding to fire, is 'overflowing'; and in the third, sixth, ninth and twelfth, the pulse of the stomach, which answers to earth, should be 'slow and full.' Metals govern the seventh and eighth moons, and the pulse of the lungs, which answers to them, is 'slender superficial, short and sharp?' In the tenth and eleventh moons, water reigns, and the pulse of the kidneys, corresponding thereto, is 'deep and slender.' An important axiom on the pulse is: 'In Spring to have the pulse of the lungs is mortal,' the pulse of the heart being set aside, 'for the heart is the son of the liver, which has the kidneys for its mother and the stomach for its wife.'"

The list of remedies is a very long one, and includes articles from plants, animals, birds, reptiles, worms and a few minerals. These prescriptions are characterized by a marvelous complexity. One work on materia medica gives about two thousand such formulæ.

There is no surgery among the Chinese. They know nothing about amputations, the arrest of hæmorrhage, the tying of an artery, the setting of a fracture, or the reduction of a dislocation. There is some use made of the cautery, and one way of employing it is the burning of a small piece of wood on the part to be treated. Acupuncture is also used. A large, dirty, rusty needle, or such like, is driven into the diseased part, which may be a joint, the liver, or, indeed, any organ. Death often re-

sults. Counter irritation is sometimes obtained by a mixture of corrosive sublimate, arsenic, salt and gluten, which is dried into "nails" and pushed into the flesh.

Vaccination has now become a common practice, but the lymph is usually inserted into the nostril.

The obstetric practice among the celestials is entirely in the hands of ignorant women, and the mortality is said to be about 20 per cent.

As there are no colleges, so there are no licenses nor restrictions. There are different grades of doctor, from those who practise among the rich down to the coolie. Fees vary greatly. If the patient be a lady, the doctor does not see her, but examines the twelve pulses carefully from behind a bamboo screen. Having thus made his diagnosis he prescribes for the patient.

In all cases of mental diseases the sorcerer, or witch doctor, is consulted.

The one bright spot in Chinese medicine is the claim that mercury has been used in the treatment of syphilis for at least four thousand years.

MORTALITY IN ONTARIO.

The Secretary to the Provincial Board of Health has issued a statement for the month of October, which upon the whole is satisfactory. It shows that, though the population returned is 10,000 over the same period a year ago, the deaths were less by 31. There is a decrease in all the infectious diseases, with the exception of typhoid fever. The death rate for October 1904, was 12 per thousand, as compared with 12.2 for October 1903.

There was only one case of small pox for the month. There were 177 cases of scarlet fever with 10 deaths. There were 239 cases of diphtheria and a mortality of 34, or over 12 per cent.

We think that this death rate in diphtheria is too high. In cases it may be impossible to employ anti-toxine on account of the price and the circumstances of the patients; but feel that if this potent remedy was used early and freely the death rate would be very decidedly cut down.

Attention is very properly drawn to the pollution of water supplies by their contamination by sewage from the growing villages and towns throughout the Province. The advice is given that the water should be filtered, and that the supplies for towns and villages should be periodically inspected.

The Secretary, Dr. Hodgetts, is giving very close attention to all questions of the health of the Province and we expect good results from his work.

THE PROGNOSIS OF EPILEPSY.

Much has been said and written upon epilepsy. The medical and rational treatment of the disease has been the subject of a great deal of study and investigation; but the general prognosis of the disease remains the same as it was before the more recent methods of treatment. Dr. William A. Turner has an interesting and instructive paper on this topic in the December issue of the *Edinburgh Medical Journal*. He shows that prior to the use of the bromides Hufeland claimed 50 per cent. of cures; Russell Reynolds, 10 per cent.; Trousseau, 13 per cent.; Herpin, 50 per cent. Since the introduction of the bromides the following results have been claimed. Nothnagel, 5 per cent.; Späth, 5; Lähr, 6; Ackermann, 7; Dana, 5 to 10; Wildermuth, 8; Habermayer, 10; and Alt, 12. Some of the differences in these statistics is due to the facts that organic disease may have not been excluded in some of the records, or that the time limit of freedom from recurrences varied. With regard to sex there does not appear to be much difference with regard to prognosis. "Rather more males than females show arrest of seizures, but the former sex gives a greater number of confirmed cases." A larger percentage of women escapes the deteriorating influence of epilepsy upon the mind than men, but when dementia sets in there is a higher percentage of women affected. With regard to men the most frequent mental impairment is loss of memory and the higher mental faculties.

The following conclusions are drawn from the study of hereditary influences. There is as much chance of arrest of the attacks in those with a family history of epilepsy as in those without such a taint. In those with a hereditary history, the chances for arrest, improvement, or the disease becoming confirmed, are equal in any given case. As regards improvement there is a larger percentage among those without the history of epilepsy, whereas among those with an inherited tendency there are more confirmed cases. A family history of epilepsy and insanity does not, however, lessen the chances of arrest in some cases; but, on the other hand, the number of confirmed cases will be greater.

With regard to age it may be mentioned that those beginning under 15 years, yield few instances of arrest, and many of the confirmed forms of the disease; whereas among those commencing at puberty, the opposite is true. Cases beginning between 20 and 35 years of age, give few arrests and many confirmed cases. Those beginning after 35 are more favorable, especially in old age.

The duration the disease has lasted has an influence on prognosis. The longer the disease has existed before treatment is commenced the less favorable the results, as to arrest or improvement, and the larger

will be the percentage of confirmed cases. The longer the disease has existed, the more pronounced will be the mental deterioration even should arrest take place under treatment.

The less frequent the seizures, the better prognosis as to arrest or improvement and the preservation of the mental faculties. The more frequent the attacks, the more frequent and profound the dementia, as a general rule. In cases where the attacks are very frequent, it is very difficult to secure even a slight arrest in their frequency or violence.

Grand mal cases are more favorable than *petit mal* cases. It is very difficult to secure arrest in the latter form of epilepsy. Mental failure is more likely to occur in *petit mal* cases than in those with *grand mal*. In some instances the mind is least affected in a few cases of *petit mal*, while it was most profoundly affected in cases with a combination of *grand and petit mal*.

In some instances there may be a very long interval of freedom from attacks, followed by recurrence. There are some genuine examples of cure. Russell Reynolds gives 10 per cent. as free for 4 to 8 years; Habermaas, 10.3 per cent., for 5 to 10 years; and Turner, 10.2 per cent. for 9 years.

THE TREATMENT AND REFORMATION OF INEBRIATES.

At a recent meeting of the Society for the Reformation of Inebriates, held in the Government House, there was a good attendance of those interested in the movement. A constitution for the Society was adopted. There was considerable discussion on some of the proposals submitted, especially with regard to lengthy commitments. It would seem as if this Society is destined to accomplish some useful reforms.

The following recommendations are also respectfully submitted:—

1. That in this inebriate reform movement the kind co-operation of the Inspectors of Prisons and Charities be respectfully requested.

2. That the attention of the medical members of the Ontario Legislature as well as that of other private members of the House be called to the inebriate reform question and their influence requested in favor of adequate provision being made in this Province for the reformation of indigent inebriates.

3. That an interview with the Premier and Provincial Secretary be requested as soon as may be considered advisable for the discussion of the following: (a) An annual grant to this Society to promote the inebriates reform movement. (b) The introduction of the proposed Bill or one on similar lines, for the economical treatment of indigent inebriates, at the next Session of the Ontario Legislature. (c) For the purpose of being able to make use of the same as an object lesson, in the meantime,

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immediate introduction (at the outset on a small scale) of the probation system.

4. That the Toronto Board of Control be asked to co-operate with Ontario Government in the early introduction of the probation system the reformation of indigent inebriates and that the Prisoners' Aid Association and the Toronto City Mission be asked to co-operate in the and supervision of inebriates placed on probation on suspended sentences.

5. That the County Judges and Police Magistrates of the Province requested to co-operate in the introduction of the probation system also to consider the propriety of imposing longer sentences in the case of confirmed drunkards—more especially in the case of degraded fed-drunkards having a long Police Court record.

PERSONAL AND NEWS ITEMS.

Dr. Dougald McBain has decided to locate in St. Thomas, Ont.

Dr. Perry G. Goldsmith, of Belleville, has been ill for some time with malarial fever, but is now making a good recovery.

Dr. Rogers and wife of Ingersoll, have arrived home from a sojourn of a few months in Great Britain, looking quite well after their absence.

Dr. and Mrs. L. F. Millar, late of Brunswick avenue, left Toronto the latter part of November for Southern California. They will spend the winter in Pasadena, returning in April.

The marriage of Miss Clara Clarke eldest daughter of Mr. W. A. Clarke to Dr. Morley Currie, B.A., M.P.P., of Picton, was celebrated at the residence of the bride's parents in Avenue road, Toronto, Nov. 23.

About fifty relatives and friends assembled in the home of Mr. E. J. Roden, 123 Dovercourt road, Toronto, on 7th December, to witness the marriage of his second daughter, Miss Eva P. Roden, to Dr. R. W. G. Gananogue.

Dr. Charles E. Treble has returned home after an extended period of post-graduate study in Great Britain. Dr. Treble is a graduate of London University, and while in London attained to the double qualification of M.R.C.S., England, and L.R.C.P., London.

Dr. A. Lesage has been notified by the French Government that he has been decorated officer of the French Academy, and Dr. A. Foucher, Director of Public Instruction, for their work in organizing a convention of French doctors in America. Both doctors live in Montreal.

Dr. Ernest Curran, who has been taking a post graduate course at Edinburgh since last spring, successfully passed his examinations for the diploma of L.R.C.P.&S., Edinburgh. He will probably not return home till next year, taking a course in the London hospitals meantime.

RESULTS OF EXAMINATIONS OF THE COLLEGE OF PHYSICIANS.

The results of the final, intermediate and preliminary examinations held in November of the College of Physicians and Surgeons of Ontario are:—

The following passed the final examination: J. A. Anderson, Smith's Falls; A. H. Adams, Whitby; J. V. Brown, Barrie; R. M. Boyd, Crookston; H. H. Bleecker, Trenton; T. Carson, Orangeville; A. H. Campbell, Ailsa Craig; D. J. Cochrane, Durham; A. W. Canfield, Woodstock; M. Caverly, Albion; H. W. Coulter, Ottawa; J. W. Cook, Strathroy; M. H. Embree, Toronto; W. S. Fawns, Udora; J. Ferguson, J. G. Fitzgerald, Harriston; R. J. Gardiner, Smith's Falls; J. F. Goodchild, Craigleith; B. H. Hamilton, Auburn; L. R. Hess, Hamilton; R. Ingram, Ridgetown; D. S. Johnston, Orillia; A. C. C. Johnson, Toronto; D. Kappele, Hamilton; F. Large, Listowel; W. A. Lawrence, Ithaca, N.Y.; H. H. Murphy, Antrim; C. M. McKay, Woodstock; H. G. McLay, Aylmer; D. W. McKechnie, Dundas; F. C. Neal, Walton; J. M. Park, Abingdon; J. M. Robb, Blind River; N. H. Sutton, Ida; D. M. Sutherland, Norwich; W. E. Somers, Waterford; N. F. Sutton, Maynooth; A. A. J. Simpson, Whitechurch; D. J. Sweeney, Caledon; T. J. C. Tindle, Peterboro'; C. E. Treble, Toronto; J. H. Tandy, Kingston; W. S. Turnbull, Milverton; T. D. White, Brantford.

The following passed the intermediate examination: G. B. Archer, Campbellford; W. A. Burr, Fergus; G. H. Bleecker, Trenton; R. M. Boyd, Crookston; R. S. Conboy, Toronto; H. W. Coulter, Ottawa; J. W. Cook, Strathroy; D. Evans, Virginia; F. S. Eaton, Freeland; James Fettes, Yeoville; R. J. Gardiner, Smith's Falls; W. Gibson, Emerald; J. F. Goodchild, Craigleith; J. C. Gormley, Finch; A. A. Jackson, Toronto; A. M. Kennedy, Barrie; J. S. LeDrew, Toronto; J. B. Larocque, Alfred; H. H. Murphy, Antrim; H. G. McLay, Aylmer; D. W. McKechnie, Dundas; J. P. McKinnon, Hillsburg; W. G. Reive, Markham; A. E. Stewart, Ruthven; D. J. Sweeney, Caledon; J. H. Tandy, Kingston; W. S. Turnbull, Milverton; K. H. VanNorman, Toronto; J. A. Wright, London; O. M. Wilson, Ottawa.

BOOK REVIEWS.

DWIGHT'S EPITOME OF TOXICOLOGY.

Manual for Students and Practitioners. By E. W. Dwight, M.D., Instructor in Legal Medicine, Harvard University. In one 12mo volume of 208 pages. Cloth, \$1.00, net. Lea's Series of Medical Epitomes. Edited by V. C. Pedersen, M.D. Lea Brothers & Co., Publishers, Philadelphia, and New York, 1904.

This little volume is the outcome of a persistent demand for a small, expeditious manual covering the essentials of Toxicology. One that will be trustworthy and modern, adapted to the needs of medical students and practitioners, and withal at a moderate price. The author has produced a book which is in every way a companion to his "Epitome of Medical Jurisprudence," and stronger commendation than this could not be given. The physician who has mastered the contents of these small volumes is indeed well equipped for almost any medico-legal emergency, and the student who uses them as his text-books has started the shortest and easiest route to a thorough grounding in an essential part of his medical education.

Some idea of the thoroughness with which the author has covered the subject may be obtained from the following brief of contents. After a section on the general principles of Toxicology the subjects are taken as follows: Irritant Poisons; Specific Irritants; Metallic Irritants; Vegetable Irritants; Animal Irritants; Poisonous Foods; Cerebral Neurotics; Spinal and Cerebro-spinal Neurotics; Depressants; Asthenics; Stimulants, etc.

While the volume is not intended and could not be expected to cover the ground exhaustively, the amount of definite and essential information which the author has so clearly presented is surprising and satisfying.

VON BERGMANN'S SURGERY.

System of Practical Surgery. Drs. E. von Bergmann, of Berlin, P. von Bruns of Tübingen and J. von Mikulicz, of Breslau. Edited by William T. Bull, M.D., Professor of Surgery in the College of Physicians and Surgeons (Columbia University), New York. Complete work now ready, in five imperial octavo volumes, containing 4220 pages, 1976 engravings and 102 full-page plates in colors and monochrome. Sold by subscription only. Per volume, cloth, \$6.00; leather, \$7.00; half morocco, \$8.50, net. Volume V just ready. 789 pages, 354 engravings, 23 plates. Lea Brothers & Co., Publishers, Philadelphia and New York.

This volume completes the most important System of Surgery that has recently appeared. It is based upon the second German edition, fully revised and brought thoroughly up to date. The translation of the revision has been done by Dr. Bull and his collaborators with great

fidelity and thoroughness. They have brought to their work not only enthusiasm and faithful effort, but also a wide surgical experience which enabled them to add judicious and helpful references to methods of practice which have gained the preference of English and American surgeons. The work is encyclopedic in character, many of its chapters exceeding in scope and detail special treatises which have been published on their subjects. The following brief outline will give some idea of the scope of the several volumes:

Volume I.—936 pages, with 361 engravings and 18 plates—covers the following subjects; Injuries and Diseases of the Skull and its Contents; Malformations, Injuries and Diseases of the Ear; of the Face (including Plastic Operations and the Neuralgias of the Head); of the Salivary Glands (including Anomalies); of the Jaw; of the Nose and its Adjacent Tissues; of the Mouth and of the Pharynx.

Volume II.—820 pages, with 321 engravings and 24 plates—Malformations, Injuries and Diseases of the Neck, Larynx, Trachea, Mammary Gland, Vertebral Column, the Thyroid Gland, the Thorax and its contents, the Spinal Cord, etc.

Volume III.—918 pages, 595 engravings and 21 plates—Malformations, Injuries and Diseases of the Shoulder and Upper Arm, Elbow, Fore-Arm, Wrist, Hand, Hip, Thigh, Knee, Leg, Ankle, Foot, etc.

Volume IV.—757 pages, 345 engravings and 16 plates—Malformations, Injuries and Diseases of the Oesophagus, Stomach and Intestines; Injuries and Diseases of the Abdominal Wall, the Peritoneum, the Liver and Biliary Passages, the Spleen and Pancreas; Hernia; Laparotomy.

Volume V.—789 pages, 354 engravings and 23 plates—Malformations, Injuries and Diseases of the Pelvis, the Anus and Rectum, the Urethra, the Penis. Abnormalities, Injuries and Diseases of the Kidneys and Ureter, the Bladder and Prostate, the Scrotum, Testicles, Vas Deferens and Seminal Vesicle, etc.

The complete work comprises five very handsome octavo volumes, containing 4,220 pages, 1,976 engravings and 102 full-page plates in colors and monochrome. The great value of the work lies in its practical and clinical character. This is supported by an abundance of pathological data, details of original research, and statistical facts which render the work of inestimable value to the student, the surgeon and the general practitioner. These five volumes constitute a complete working library on Surgery, and modern progress is so rapid and so solidly founded, that every surgeon, as well as every physician who has occasional surgery to perform, owes it to himself and to his patients to add this work to his shelves.

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matter may be gained elsewhere and as a matter of fact should have been mastered before this book is taken up. The illustrations are very numerous, Politzer being the source of most of those on the membranous tympani. The illustration on page 493 might have been omitted, and more space given to the diseases of the accessory nasal sciences. The work is easy to read and will be found very helpful to those for whom it is especially written.

ESSENTIALS OF MEDICAL CHEMISTRY.

Containing also questions on Medical Physics, Chemical Philosophy, Medical Processes, Toxicology, etc. By Lawrence Wolff, M.D., formerly Demonstrator of Chemistry at Jefferson Medical College, Philadelphia. Sixth edition, thoroughly revised. By A. Ferree Witmer, Ph. G., formerly Assistant Demonstrator in Physiology at the University of Pennsylvania. 12mo volume of 225 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Cloth \$1.00 net. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

We need but mention the fact that this little work has reached its sixth edition to prove beyond question its practical usefulness. The recent important discoveries in physics and inorganic chemistry have rendered it necessary, in Dr. Witmer's revision, to make extensive additions almost to every part of the work. The subject of organic chemistry, especially organotherapy and the substituted ammonias, has also been carefully revised and much new matter added. We find the book unusually excellent.

HARE'S PRACTICAL THERAPEUTICS.

A Text-Book of Practical Therapeutics; With Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. de Schweinitz, Edward Martin and Barton C. Hirst. New (10th) edition, much enlarged, thoroughly revised and largely re-written. Octavo, 908 pages, with 113 engravings and 4 full-page colored plates. Cloth, \$4.00 net; leather, \$5.00 net; half morocco, \$5.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1904.

This very convenient, comprehensive, trustworthy, popular and widely used work on Therapeutics requires little introduction to the medical profession or the student world. The demand which has necessitated in a little more than a decade, ten editions and three times as many printings is readily understood upon an examination of the volume.

Every new edition means a complete revision, which in the present issue has been so thorough that the entire work has been reset in new type.

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DUS DISEASES AND INSANITY.

By John C. Shaw, M.D., late Clinical Pro-and Nervous System, Long Island College, ourth edition, thoroughly revised. By D., Clinical Assistant, Columbia University, Visiting Neurologist, City Hospital, New ages, fully illustrated. Philadelphia, New s & Co., 1904. Cloth, \$1 net. J. A. Car-ge St., Toronto.

ry branch of medicine during the last few minent than that considering diseases of mind. Dr. Smith Ely Jelliffe, therefore, ew fourth edition, has found it necessary iging the order of arrangement in accord these important subjects. Quite a com-nt is the grouping of subjects in such a l relations of affiliated nervous disorders. ice to the student.

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OF BACTERIOLOGY.

esident Physician at the German Hospital, thoroughly revised. By Karl M. Vogel, at the College of Physicians and Surgeons, ork City. 12mo volume of 343 pages, with , and six plates. Philadelphia, New York, ., 1904. Cloth \$1.00 net. J. A. Carveth , Toronto.

apid progress in Bacteriology has involved ence, necessitating a thorough revision in

It is with pleasure we note the inclu-

sion of all the recent advances in the subjects of Immunity, Tuberculosis, Yellow Fever, Dysentery, Bubonic Plague, and other infectious diseases, making the work reflect as faithfully as possible the present status of Bacteriology. We can confidently say that this book in the present fifth edition will be found of inestimable service to the student.

SALINE WATERS.

By Dr. Carl von Noorden and Dr. Carl Dapper. Part V of Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. Translated by Boardman Reed, M.D., New York. A. B. Treat & Co., Price 75 cts.

This monograph deals with the effects of the saline waters of Kissingen, Homburg, on metabolism. The authors have had a large experience with these waters, and are able to speak in definite language. They take up such topics as the effects of these waters on gastric secretion, the digestion of fats, the metabolism of proteids, the excretion of uric acid, and the use of fruits, salads, vinegar, etc. The book is well written and will prove very useful to those who peruse it.

HALL'S EXPERIMENTAL PHYSIOLOGY.

A Manual of Experimental Physiology. By Winfield S. Hall, A.M., M.D., Ph.D., Professor of Physiology in the Northwestern University Medical School, Chicago. In one octavo volume of 245 pages, with 89 engravings and a colored plate. Cloth, \$2.75 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1904.

The laboratory method of presenting such a science as Physiology possesses many advantages, and leads directly and surely to definite results. This method has been followed by the author in the Northwestern University Medical College for many years. The exercises have heretofore been furnished the students in typewritten sheets which undergo yearly revision and improvement, and this book in its present form represents therefore a gradual evolution, and furnishes the accumulated experience of a competent, careful, conscientious and successful teacher. A strong feature of the work is its practicality. Throughout it will be noticed that the author never loses sight of the fact that the student is preparing for clinical practice, and the experiments and laboratory work all bear directly upon the requirements of Internal Medicine and Surgery.

The preliminary lessons in Cytology are presented as a feature of the volume. This introductory course has proved to be a substantial foundation to the study of General Physiology, as well as a valuable accompaniment to the study of Histology.

Some idea of the scope of the volume may be formed from the following brief of its contents. After an introduction on the subject, Part I. Experimental General Physiology takes up Cytology and the General Physiology of Muscle and Nerve Tissue.

In Part II., on Special Physiology, will be found the chapters on the Circulation of the Blood; on Respiration; Normal Hæmatology; Digestion and Absorption; Vision; the Nervous System and the Muscular System.

An important feature of the work is the attention given to the physiological action of drugs.

THE ACID AUTO-INTOXICATIONS.

by Dr. Carl von Noorden and Dr. Mohr. Part IV of *Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition*. Translated by Boardman Reed, M. D., New York. E. B. Treat & Co., Price 50 cts.

The author contends that those who would treat disease successfully must keep themselves posted on all matters concerning digestion, secretion, excretion, and elimination. He claims that the acid auto-intoxications are among the most serious conditions the physician has to treat. His little volume deals with such topics as the acid products of metabolism, acetonuria, diabetic coma, the acetone bodies, etc., etc. The book contains much valuable information and like all Von Noorden's books could be carefully studied.

R. EDEBOHLS ON SURGICAL TREATMENT OF BRIGHT'S DISEASE.

Surgical Treatment of Bright's Disease, By George M. Edebohl, M.A., M.D., LL.D. Professor of the Diseases of Women in the New York Post Graduate Medical College and Hospital; Consulting Surgeon to St. Francis Hospital, New York; Consulting Gynaecologist St. John's Riverside Hospital, Yonkers, N. Y., and to the Nyack Hospital, Nyack, N.Y.; Fellow of the New York Academy of Medicine, and of the American Gynaecological Society; Honorary Fellow of the Surgical Society of Bucarest; Permanent Member of the Medical Society of the State of New York, etc. Frank F. Lissiecki, Publishers, 9 to 15 Murray St., New York, 1904.

The author states that two-fifths of the book is made up of some of the most recent contributions to the medical press upon the subject. The remaining three-fifths is new matter and deals fully with the important topic of the results of the surgical treatment of chronic Bright's disease. The book contains much interesting matter and reflects great credit upon the eminent author who proves himself to be as fascinating a writer as he is brilliant as a surgeon. We feel sure that all who secure a copy of this work will find it well worthy of careful study.

BISHOP ON BLOOD PRESSURE.

Blood Pressure as affecting Heart, Brain, Kidneys, and General Circulation.
A practical consideration of Theory and Treatment by Louis Faugeres Bishop, M.A., M.D., Physician to the Lincoln Hospital, New York; Late Chairman of the Section on Medicine of the New York Academy of Medicine; Member of the New York Pathological Society; the Neurological Society, Alumni Association, St. Luke's Hospital, etc. New York: E. B. Treat & Co., 241-243 West 23rd Street, 1904. Price, \$1.00.

For some years the subject of arterial tension, blood pressure and arterio sclerosis have occupied a good deal of the attention of scientific investigators and clinicians. The little volume before us is an important contribution to the subject, under the headings Alteration of Pressure in the Blood Vessels, Primary Low Pressure cases, the Management of Primary Low Pressure cases, High Pressure cases, the Management of High Pressure cases, Obscure Symptoms of Circulatory Disorder, the Management of secondary Low Pressure cases, the use of nitrites, etc. The book is a small one with much in it. Many excellent suggestions are made on the treatment of the various forms of vascular derangements discussed by the author. The book will well repay careful study, as it is brimful of information.

MISCELLANEOUS.

RESPIRATORY TRACT; AFFECTIONS, SYMPTOMS AND TREATMENT.

By Dr. ARTHUR B. SMITH, Springfield, O.

The average physician is frequently vexed in finding a condition which resists his best efforts to bring about a cure. This holds good in almost every disease at some time or other, but particularly in affections of the respiratory tract, where there may be a great variety of symptoms in several cases of the same disease.

Almost every physician has some favorite prescription for coughs, bronchitis, laryngitis, etc., which he uses until suddenly it seems to lose its efficacy—why, no one knows. Then another remedy takes its place until it, too, fails to give the desired result. It is rarely that one finds a cough remedy which will be consistently good in the majority of cases. Theoretically there appears to be a well-founded objection to the use of cough syrups in general, but nevertheless there are times when nothing else gives satisfaction; therefore, the physician pins his faith to that remedy from which he and his patients derive the most good. It is not always easy to find such a remedy, but when it is once found, it is equally difficult to dispense with, and often the physician is almost compelled to resort to a routine treatment. In such cases, of course, he wants the best.

There are constantly being placed on the market new formulas for infections of the air passages. Some of these formulas are of undoubted benefit in some cases, but usually it will be found that the results are far from satisfactory. Many of them cannot be taken when there is any gastric complication, as is sometimes the case, because of consequent nausea and vomiting. Others seem almost invariably to act as cardiac depressants and are highly objectionable for that reason. With the advent of heroin, however, these disagreeable features have, to a great extent, been avoided. Heroin, in the vast majority of cases, can be tolerated by even the most sensitive stomach, and, if any disturbance should occur, it can easily be relieved by decreasing the dosage and then gradually resuming the previous amount. Heroin can be prescribed, in cases which are complicated by an enfeebled heart, without danger of depressing effects. As compared with codeine, its sedative action on the respiration is much more powerful. The fatal dose of heroin is said to be one hundred times the efficacious dose, while with codeine the efficacious dose is one-tenth of the fatal dose. In other words, heroin is ten times safer than codeine, and can be given in much larger doses, if necessary, without danger. It appears to exert a specific action on the center of respiration without causing disturbances of any other organs or centers, and there is no danger of acquiring any habit by its use.

In phthisical patients the well known lack of appetite and intolerance of various foods render it imperative to give remedies which will not in any way interfere with the digestive functions, while at the same time controlling or alleviating the cough and other distressing conditions.

Some time ago my attention was called to a preparation composed of a solution of heroin in glycerine, combined with expectorants, called Glyco-Heroin (Smith). Each teaspoonful of this preparation contains one-sixteenth grain of heroin by accurate dosage. It is of agreeable flavor, therefore easy to administer to children, for whom the dose can be easily reduced with any liquid, or by actual measurement. It possesses all the advantages not shown by any other preparation I have used, and is free from all their disagreeable features.

In citing some of the cases treated with this remedy I shall not go into a minute description of any case, but briefly state the conditions which existed and the results obtained, which were uniformly good.

CASE 1. S. B., aged 16. Caught a severe cold while traveling. This developed into an unusually severe attack of bronchitis with mucous expectoration, pain, cough and some slight fever. Prescribed Glyco-Heroin (Smith) one teaspoonful every two hours, decreased to every three hours. After a few doses were taken there was a decided improvement, the respirations were slower and deeper, the expectoration freer and the temperature normal. In a few days the patient was practically well and able to

return to school. No medicine except Glyco-Heroin (Smith) was given and the results from its use were excellent.

CASE 2. W. L., aged 31. Acute bronchitis. Painful cough, with difficult expectoration, particularly when in a reclining posture. Glyco-Heroin (Smith) in teaspoonful doses every three hours gave speedy relief and a cure was effected in a few days.

CASE 3. S. W., aged 60. Chronic bronchitis. Had coughed for years, with expectoration of a thick yellow purulent and very offensive matter. Had lost flesh gradually until about twenty pounds below usual weight. No appetite, very constipated, pains all over chest, night sweats and insomnia. Patient on the verge of nervous prostration and greatly weakened. She was given bromides, a tonic, and Glyco-Heroin (Smith), the latter in the usual dose at intervals of two hours. The first few doses were not well borne, as they seemed to cause some nausea, but by giving a smaller dose and then gradually increasing it, tolerance was soon obtained, and the results were remarkable. The cough and expectoration greatly decreased, the appetite improved, and the patient became much better in every way. The treatment was continued as before, except that the Glyco-Heroin (Smith) was given every three hours. In three weeks the patient was eating almost everything she pleased, and sleeping well. The night sweats had stopped, together with the cough, and, as the patient expressed it, she "felt like another woman." At present she is in perfect health and needs no medicine except an occasional laxative.

CASE 4. B. E., aged 26. Severe bronchitis accompanying an attack of influenza. Various remedies were tried in this case, with negative results, until Glyco-Heroin (Smith) was given in teaspoonful doses every three hours. In a short time decided relief was obtained and the cough stopped permanently.

CASE 5. R. L., aged 6. Capillary bronchitis with pains over chest, cough and difficult expectoration. Glyco-Heroin (Smith) administered 15 drops every 3 hours. After taking a few doses the condition was much improved, and a speedy return to perfect health followed.

CASE 6. W. H., aged 5. Whooping cough. Spasmodic paroxysms of coughing, sometimes being so severe as to cause vomiting. Tenacious mucus was present, requiring great expulsive effort to loosen it. There was little fever, but the patient was much prostrated and weakened by the cough. Glyco-Heroin (Smith) was given in 10 drop doses every two hours with good results. This was combined with hygienic treatment, the patient being given as much fresh air as possible. In a few days the condition was much ameliorated, the cough under fair control, expectoration was freer and easier to raise, and convalescence uneventful. The case was discharged cured and there were no unpleasant sequelæ, the patient at present being in perfect health.

VALUABLE AUXILIARY IN THE TREATMENT OF PNEUMONIA.

Pneumonia is nowadays considered a general infectious disease, due to a special germ, and not, as was formerly believed, a local condition resulting from exposure to cold. It is therefore of the utmost importance that once it appears in a household every precaution should be taken to prevent its spread to other members of the family. As the infection is carried through the air, this cannot be accomplished by fluid disinfectants; an unirritating and non-poisonous antiseptic which is sufficiently powerful to destroy the infection and yet can be freely breathed by the patient is required. There is only one safe and efficient agent of this kind, and that is Vapo-Cresolene. Experiments by a member of the Pathological Department of Yale University have demonstrated its germicidal power. Its vapor permeates the air of the sick-room, destroys the infection at its source, and when inhaled by the patient all cough and irritation in the air-passages, promotes expectoration, thus aids materially in bringing about recovery.

CHOREA AND ANEMIA.

By ROSEMER W. MILLER, M.D., Ph. G., Barton Heights, Va.
 Lecturer on Nervous and Mental Diseases, and Professor of Theory and Practice of Pharmacy, University College of Medicine, Richmond, Virginia.

In the etiology of chorea, nothing is noted relative to anemia. It is simply accounted as an accompanying symptom of the condition. Medical literature emphasizes the relation between rheumatism and chorea, with anemia as an important symptom. After observation of several cases, I am strongly of opinion, however, that anemia as a causal factor is worthy of investigation.

Anemia of toxic origin presents pathological conditions which favor production of choreaic affections. It is true that simple anemia is, as a rule, of secondary origin, and, viewed in this light, it may be argued that if chorea arises, it is the result of the primary and not of the secondary conditions—thus agreeing with the admitted etiology. This argument, however, will not satisfactorily explain those cases of chorea which arise remotely from the primary condition, but recently from the secondary effects.

I submit three cases in which symptoms, treatment, and recovery tend to intimate at least a possible relation between anemia and chorea.

CASE I.—A female child of eight years gave a history of typhoid fever eight months prior to my visit. According to the mother's statement, the child had made a quick and good recovery, gaining rapidly in weight and exhibiting the energy of her former life. Six months later

she became irritable and pale, with pain in her arms and legs, which condition was soon followed by gastric disorders and irregular spasm of the muscles of the face. Simple anemia was in evidence from objective and subjective symptoms alone, but was unquestioned in the light of the results obtained from blood examination—the red blood element being present to the extent of barely 3,000,000 red corpuscles per c. m.

This case was treated with two teaspoonfuls of pepto-mangan (Gude) and two drops of Fowler's solution, three times a day. After gastric symptoms had abated somewhat, two raw eggs per day were added to the diet. The patient was discharged in five weeks, completely recovered.

CASE II.—A female child of ten years of age; gave history of malaria (a well-defined case of intermittent fever) one year previously. The pallid condition of the child induced the mother to solicit my aid. Upon examination, I found slight choreic movements which had escaped the mother's eye, though she did admit that the child "could not sit still very long at a time," and "was constantly working her fingers." The blood examination revealed no plasmodium. The red cells were reduced to 2,800,000 per c. m., with a proportionate decrease of hemoglobin.

Pepto-mangan (Gude) alone was employed in doses of two drams in a glass of milk three times a day. The blood examination four weeks later showed red cells present to the amount of 3,900,000 per c. m., at which time I dismissed the case completely recovered.

CASE III.—A female child of thirteen years. Two months before my visit, the mother informed me, the child became peevish and pale and was reprimanded at school for her inability to write neatly. She was taken from school, but she grew rapidly worse. Morning nausea, vomiting, headache, and anorexia were her daily companions. I found her with pronounced hysteric spasm, with involvements of the upper and lower extremities. Hemic murmurs were plainly apparent, but no endocardial irritation could be determined. The blood count showed reduction in red cells to 2,100,000 per c. m. The hemoglobin was reduced to a degree greater than the red cells. A curious feature of this case was the morning nausea. Immediately upon awakening, she experienced nausea, which was followed by vomiting. I discovered, however, that this condition was superinduced by odors from the kitchen and directed that a small sponge, moistened with creosote water, be placed over the nose and mouth before the preparation for breakfast began. The annoying symptom was promptly checked by this simple method. The anemia in this case may have been produced by malnutrition, but even this view is mere speculation.

The irritability of the stomach in this case was so pronounced that I did not deem it wise to give nourishment—not to speak of medicine.

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stomach. During the first four days rectal alimentation was employed. A nutritive enema, consisting of four ounces of peptonized milk and two drams of pepto-mangan (Gude), was given every six hours. Small amounts of peptonoids with creosote on ice were given by the rectum. Egg albumin was taken in all the water she drank. After five days, the stomach was tested with small amounts of milk and pepto-mangan (Gude). Beginning with four ounces of milk and one dram of pepto-mangan (Gude) every four hours, the amounts of each were rapidly increased, until after three days the patient was taking eight ounces of milk and one dram of pepto-mangan (Gude) every two hours and four drams of pepto-mangan (Gude) three times a day. This diet, plus three raw eggs a day, together with the other treatment, was all that was employed for six weeks. The blood examination at this time showed a highly gratifying condition—the red blood cells being present to the extent of 4,100,000 per c. m. The bloom of health once more tinted the cheek, and the shrine of St. Vitas lost a visitor.

A SPLENDID MEDICINAL AGENT.

The value of the ozoniferous oils, essences and ethers in the antiseptic treatment of disease, has been largely recognized and demonstrated by the extensive and successful employment of Listerine in surgery and in general medicine. Listerine is the trade name or descriptive name of the most successful formula of modern pharmacy, consequently it has been utilized most extensively by medical practitioners, and "imposed upon" by nearly every manufacturing pharmacist and in many drug establishments to an extent that does not apply to any other medicinal preparation within or without the pharmacopœia. This tribute to the originality and value of Listerine is very flattering to its manufacturers, who continue to enjoy an uninterrupted increase in the output of their laboratories and a constantly widening market, so that Listerine is now obtainable and procurable in any reputable pharmacy anywhere. It advertises itself by its own good qualities; indeed the manufacturers have long decided that the best advertisement of Listerine is Listerine. -*The American Druggist*, October, 1904.

ANTIPHLOGISTINE AND POULTICES.

A prominent physician in lecturing recently on a case of senile pneumonia at the Philadelphia Hospital, said: -

Hot flaxseed poultices, well made so as to retain their heat for four hours, were kept about the thorax during the day and at night were retained by a lamb's-wool jacket, for the better part of a week. It is im-

portant when poultices are used that they should be well made and should retain their heat for four hours, in order that the patient shall not be continually disturbed to change them. Fever patients need rest, not only sleep at night, but rest during the day. It is rarely wise to wake the patient, either for food, for medicine, for bath, or for any other application. Save in exceptional instances, sleep will do more to favor recovery than the agent for whose sake it is interrupted."

The time was when the above statements would have received the hearty endorsement of all thoughtful medical men. But this is not the ox-cart, candle or horse-car age. We are living in the twentieth century. The old things must be laid aside. They are valuable only as antiques.

We have the cleanly and convenient electric light instead of the greasy candle. Why not Antiphlogistine, made of cleanly and aseptic materials and capable of maintaining a uniform degree of temperature for 12 to 24 hours or more, instead of the bacteria-breeding, soggy, clammy linseed and other poultices?

Most up-to-date doctors say,—"Yes, we know all about Antiphlogistine and use it regularly as routine treatment in all cases where inflammation is present and a local remedial agent is indicated."

Picture an individual with a temperature 104 to 105 degrees, pulse 120-140, resp. 40-70. If any one craves and absolutely needs rest and sleep it is such a patient. A linseed poultice affords a very poor means for the continuous application of moist heat, nothing more. It cannot be sufficiently well made to retain a temperature of value for more than a half hour. Antiphlogistine need not be changed oftener than once in 12 to 24 hours during which time a comparatively uniform temperature is maintained. Refreshing sleep is invited, and not hindered. It stimulates the cutaneous reflexes, causing a contraction of the deep seated and coincidentally a dilation of the superficial blood-vessels. At the same time it attracts or draws the blood to the surface—flushes the superficial capillaries—bleeds but saves the blood.

The circulation is thus favorably affected. The aggravating symptoms are almost immediately ameliorated. Congestion and pain are relieved, the temperature declines, blood pressure on the over-worked heart is reduced, the muscular and nervous systems are relaxed and refreshing sleep is invited.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about One Hundred

DET.

1905, provided that an Essay must be worthy of the Prize shall

be upon any subject in Medicine must be received by the Secretary.

It must be clearly stated in the title, but must be plainly written on a sealed envelope having on the outside the name and address of

the successful essay or a copy of the same; other essays will be returned after the award.

If awarded, no essay of sufficient merit, having been submitted in

R. NEILSON, M.D.,
Secretary.

CATALOGUE.

There is published with annual frequency a Catalogue of Medical Literature, Surgical, Pharmaceutical, and Chemical, in English Language.

It is published by all Medical publishers, and is a more convenient little book than any other. It should be on the desk of every physician. It is furnished gratis, and a copy will be sent if addressed to

W. B. Saunders & Co.
501 North Second Street,
Philadelphia.
New York.
Catalogue.

ON THE TREATMENT OF THROAT DISEASE.

Especially called upon to recommend Thymoline for the treatment of the throat.

Acute and Chronic Laryngitis are now treated by the damp chill the mucous membrane, fine capillary network, takes the place of the blood vessels or capillaries beneath the

come congested and their function practically suspended. The blood cells through lack of nourishment die and are thrown off. The glandular secretions are altered; instead of excreting a bland, non-irritating mucus, we have present an acid discharge most irritating in type. This is about the condition we find in all catarrhal inflammations.

How does Glyco-Thymoline apply here? What are its special advantages?

When applied warm in a 25 per cent. solution, Glyco-Thymoline gives a soothing sensation to the inflamed membrane, due to its anæsthetic or anodyne properties.

Glyco-Thymoline quickly dissolves all accumulations of thick, ropy mucus, crust formations, etc.

Glyco-Thymoline in a 25 per cent. solution, being approximately of the same alkalinity and specific gravity as blood serum, causes by its exosmotic action (the passage outwardly through the tissues of normal secretions and products of inflammation), a rapid depletion of the engorged tissue, thus aiding nature after her own manner in restoring capillary circulation, normal glandular action and fostering cell nourishment which soon brings about a general normal condition to the membrane.

DR. HAMILL'S CANADIAN MEDICAL, DENTAL AND DRUG EXCHANGE OFFICE.

The Canadian Medical Exchange, conducted by Dr. Hamill for the purchase and sale of medical properties has for the past 10 years met with such approval of the profession that a very great percentage of all the medical sales put through in Canada are consummated through his efforts. The methods adopted are up to date in every particular, offering to vendors a maximum of security against any piracy or dishonorable dealings and offers a short cut to make a sale by bringing into contact men who want to buy with men who want to sell. Physicians should take advantage of the benefits to be derived from this Exchange when they are thinking either of selling or buying.

A FEW REMARKS ON ASTHMA.

Asthma is entirely a spasmodic condition produced by a spasm or contraction of the circular muscular fibres of the air tubes by which the tube caliber is reduced and breathing becomes abnormally difficult. It is a most oppressive condition and when the spasm is over it leaves the

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is essential to prevent the asthmatic attack point of greatest importance in the treatment of the general health; if this can be necessarily supplied with normal power which bring on an attack and to stand the instant shortness of breath, aggravated at indicates either an asthmatic or emphysema condition the air cells are abnormally dilated they coalesce one with another and the normal capacity is greatly reduced, consequently, the patient suffers from dyspnoea. As the results of this the chest respiratory movements are very much restricted and the blood is very imperfectly oxygenated as a result of a mal-nutrition and anæmia. To prevent such attacks, as well as the spasms, it is highly important to build up the lung tissues by building up the chest wall this is completely accomplished it relieves the shortness of breath. It lessens the tendency to respiratory spasm. To restore the natural elasticity to enable it to recover its elasticity and to prevent it by supplying an absolute and perfect

science I have found that Bovine meets even with impunity at all ages. It supplies the enfeebled circulation—and keeps up a

E. E. ROWELL, Jr., M.D.

OXYGEN PEROXIDE.

GLASS BOTTLES CAN BE REDUCED TO A MINIMUM.

Engineering Record, of Saint Louis, Mo., October, 1904.

It lies in the way of producing a sound container under high pressure, as, for instance, steel, is the fact that no process for making them has been discovered.

Ordinary amber glass bottles have been found worthless, though a device patented by Mr. Edwards overcomes this delinquency.

It reduces the danger of bursting of the bottles the bottles, having this device, are kept in

stock standing up, the pressure resulting from shaking, high temperature in course of transit, etc., will not rise much above four or five pounds to the square inch; and, therefore, though occasionally a bottle may crack or burst, it is not due to pressure, but to the inherent imperfection of the glass, arising either from the lack of homogeneity, or else imperfect annealing, or both, to which we have already referred.

The worst feature of this unreliability in the bottle is, that there is no accurate way of detecting it. A bottle may be submitted to a pressure of a hundred pounds to the square inch, without betraying signs of weakness, yet even with nothing in it, it may burst or crack within an hour.

The only remedy in these conditions as to the bottles, and that is not absolute, is in changing the material from which the containers are made, and substituting, for the unreliable amber glass, a good article of flint glass. While, as we have intimated, this does not absolutely remove the danger of loss by explosion or cracking, it greatly reduces it, and when the flint glass container is closed by Marchand's Safety Valve Stopper, danger is reduced to a minimum, beyond which, in the present condition of the technics of bottle-making, it is impossible to go.

This is exactly what Mr. Charles Marchand, the manufacturer of hydrozone, glycozone, peroxide of hydrogen, etc., intends to do. Just as soon as his present stock of amber glass containers is exhausted, he will use exclusively flint glass, every bottle being corked with an automatic safety valve stopper. By adopting these expedients, Mr. Marchand, having done all in his power to prevent breakage, can go only one step further—to make good any losses from that direction—replace the bottles that get broken from this cause. Beyond this, it would be unreasonable to expect him to assume further responsibility. The actual danger to life or limb from the bursting of a bottle of hydrogen peroxide, or any of Mr. Marchand's preparations, is trivial, as compared with those arising from the explosion of bottles of beer, ginger ale, champagnes, and other sparkling wines, or even Apollinaris or other heavily aerated waters.

When any of these rupture, the fragments are driven, not only with all the force and energy of the already liberated gases, but with the augmented energy of the residual gas suddenly set free, and so may inflict severe, sometimes irreparable damage. The safety-valve arrangement in the stopper of bottles of hydrozone, prevents the sudden disengagement of a great volume of gas.

Assuming that through some imperfection of the stopper, the puncture should close as soon as the pressure from within rose to a point far within that required for the rupture of the bottle, the stopper, not being wired, but merely tied down, will be forced out.

But glass is a proverbially brittle and treacherous substance, and it is liable to break in the hands of anybody, at any moment, and without any discoverable or apparent cause, and that whether filled or not. As a consequence there must always be some risk attached to the handling of glass containers. The best that can be done, as we have suggested elsewhere, is to reduce the risk of rupture or fracture to a minimum, and this Mr. Marchand has done, not only by his safety stopper device, but also by the promised substitution of the stronger flint glass. The retail trade will, we are sure, welcome this latter change most heartily, since it completes and supplements the efforts made in the mechanical direction, and thus removes, as far as lies in human efforts, all danger arising from handling Marchand's goods.

A SCOTCH DOCTOR'S OPINION.

The Quarterly Journal of Inebriety, so well and favorably known through the instrumentality of its brilliant and philanthropic Editor, T. D. Crothers, A.M., M.D., quotes the following statement in reference to pain relieving remedies from one of Great Britain's noted medical men, Dr. John Stewart Norvell, Resident Surgeon, Royal Infirmary, Edinburgh; 'Antikamnia Tablets are a remedy for almost every kind of pain, particularly for headaches, neuralgias and neuroses due to irregularities of menstruation. They act with wonderful promptness, the dosage is small, two tablets. The undesirable after-effects so commonly attending the use of other coal-tar analgesics are entirely absent and they can therefore be safely put into the hands of patients, for use without the personal supervision of the physician.'

SANMETTO IN ORIGINAL PACKAGE.

Sanmetto proves an admirable success whenever prescribed in the original package, thereby getting the genuine article. Sometimes I give prescription in smaller quantities, and am disappointed in the results, thereby convincing me that a spurious article has been palmed off on my patient.

Marble Falls, Texas.

S. B. HAYGOOD, M.D.

, F.R.C.P., F.R.S.

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THE PROFESSION.*

By SIR JAMES GRANT, M.D., K.C.M.G., Ottawa.

GENTLEMEN,—A response to the noble sentiment "The Profession" and pleasure. At no period in the history of such unmistakable evidence of progress and advance of scientific research, "Small talk may be said equipment of a successful doctor," but, on the revert to a few of the leading problems of scientific few months. The Wellcome Research Laboratories at the Gordon Memorial College, the result instance of Lord Kitchener, is a great advance promoting the study of technical education, bac- ill leading to a more comprehensive knowledge infectious diseases, of man and beast, peculiar ertainly a broad and comprehensive scheme of tive of great service to the State. Dr. Balfour, , and already research work has commenced in he anopheles in which Dr. Ross established a

at Egypt and the Nile should thus become the nced civilization which will, in time, add greatly y the schools of tropical medicine. The Medical is Exposition has brought to light exceedingly data by master minds in the profession. The Principle in the study of Neurology by Dr. xceedingly able and comprehensive paper. The e study of diseases, is quite as evident for the logy, as for any other. The signs of readjust- about all we can learn in the study of disease.

is a definite condition, in fact, both are move- ments towards some relatively endurable equilibrium. The biographical principle, as applicable to the problem of disease, is no longer set aside by the conservative physician. Doubtless, the able contributions made by physiologists, psychologists and biologists have thrown much light upon the clinical problems of compensation and adaptation. According to Putnam in no department of pathology is it so difficult to arrive at satisfactory conclusions, by the aid of the anatomical method alone, as in the

*Reply to the toast of "The Profession," at the banquet of the Ottawa Medico-Chirurgical Society, Russell House, Ottawa, January 5, 1905.

partment of neural pathology. The remarkable paper is an object lesson to the profession, and worthy of the most careful consideration. The next paper to which I shall refer briefly is by Dr. Webster, of Chicago: "Some Fundamental Problems in Obstetrics and Gynecology." He considers fully and ably the following subjects, determination of sex, structure of the ovary, function of the ovary, antagonism between maternal organ and ovum, and lastly the functions of the placenta. Dr. Clarence Webster is a Canadian and, when a student in Edinburgh, distinguished himself by original researches on Uterogestation, and made an extensive instructive pathological collection, which, unfortunately, was destroyed by fire. For a time he held an important position in McGill University, a few years ago was called to fill a chair in Gynecology in Chicago. As to sex, Dr. Webster states that all attempts to regulate the position of sex in the human foetus in utero have certainly met with failure. He favors the idea that in the great majority of cases the placenta is the route by which micro-organisms and toxins reach the foetus. The paper is historic in character, and gives evidence of most careful and unclouded deliberation. To our profession, the paper of Dr. Robert Saundby of Birmingham, on "The Indications for Operative Interference in Diseases of the Stomach" is of great moment. He states that chronic stomach diseases, not amenable to medical treatment, and which cause serious interference with nutrition, are within the field of surgery. Dr. Maylard, of Paris, says that "No physician of experience in diseases of the stomach would accept the opinion expressed by Maylard, at the Paris Congress, that every case of severe and persistent dyspepsia, justified an early exploratory incision." The paper of Saundby, *British Medical Journal*, vol. 17, 1904, is a careful exposition of this subject, and an undoubted evidence of advancement in surgical science.

Recently death has called from the ranks of the profession, two able men, Finsen and McCallum, to whom I shall refer briefly. The former, now laid at rest in Copenhagen, was followed to the grave by representatives of three Emperors, and three Kings, besides many regal personages, thus attesting the place he occupied, by the men of the world, learned, and professional.

For years he was an invalid and devoted himself almost entirely to laboratory work. The regurgitation of his heart could be heard several feet off, according to Dr. Hopkins, of New York, and he carried in his abdomen several gallons of fluid, for which he was tapped several times. Even under such trying circumstances, he conducted his "Institute" was a puzzle to many. In lupus, rodent, ulcer, carcinoma, birth marks, eczema, and cicatrices after operation for malignant disease, the opinion expressed by those able to judge was that his treatment had no equal.

By the death of Dr. Duncan Campbell McCallum, November, 1904,

not alone Montreal, but Canada, lost one of her ablest and most common sense practitioners—a man of sound judgment, careful observation, and reserved deliberation. He held with honor several chairs in McGill University, in all of which he discharged the duties and responsibilities devolving upon him with marked ability. Of the entire staff of my Alma Mater, McGill, of fifty years ago, not one is left. As a physician he was a trusted friend and counsellor, who always brought cheer and encouragement into every household in his rounds of professional duty.

Culture is an important factor in the life history of the physician, and cannot begin too soon. The brain like the stomach requires a change of diet to keep it strong, active and vigorous. In this progressive age, the profession should keep in touch, not only with the current literature of the day, but as well, be fortified by the intellectual friction of the older masters.

A western physician, travelling abroad, met the distinguished Charcot in Paris to whom he spoke in high terms of his preceptor. What has he done, I have not seen any of his writings. He never wrote anything I am aware of, but he had a most extensive practice. Said Charcot, is that the proper estimate of professional excellence?

Many are proud to be called practical with no spare time to write. Such men do not rise to the highest standard of the profession. Large incomes and bank books are of little account, when contrasted with the careful record of passing events, in the life history, and discharge of the honorable duty and responsibility of the trusted physician. Nothing leads more to establish a good reputation than method and system in defining disease and its manifestations, all of which I would most strongly recommend to my young friends. In conclusion let me ask you what were our great grand parents doing about one hundred years ago. In 1805 England feared a Napoleonic invasion. Pitt was then at the helm of affairs, and Prime Minister of England at 24 years of age. His rival, Fox flourished about the same time and died shortly afterwards. In the exact line of literature, seldom has there been a time, when so many master minds flourished. Sir Walter Scott, Wordsworth, Lamb and Coleridge, had then established their intellectual power, and almost marvelous personality. The very schoolroom was then honored by Macaulay, Carlyle, and Shelly, who have since given the world a literature, the pride and admiration of all thinking people. Before resuming my seat, let me recall an event in the life of Michael Angelo. In Venice, he said, his mission was to take "The Angel" out of a large block of marble, placed in front of him, which he hoped to accomplish.

Our mission is to remove disease as far as possible, which is frequently like the angel of Michael Angelo, concealed from view, but gradually and steadily, through the advancement of science, is placed in clearer light.

THE RELATION OF MYOCARDIAL AND ARTERIAL
CHANGES TO VALVULAR LESIONS.*

By HOBART A. HARE, M.D., of Philadelphia
Professor of Therapeutics and Materia Medica, Jefferson Medical College.

Now of no better theme on which to address you this evening than the somewhat well-worn, but, nevertheless, interesting subject of cardiac excluding valvular lesions. It is a theme of interest, because ranging years, every one of us who lives to early old age will probably in some degree, at least, certain changes in his heart muscle and the blood vessels themselves which will sooner or later modify his capacity for work and even, perhaps, for the enjoyment of life; and, again, the noteworthy fact that no pursuit in life so commonly brings on these physical states as does that of the physician. Our ranks are yearly being at the top by the onslaughts of cardio-vascular degenerative changes, and we find men like Pepper and Da Costa dropping suddenly in the forefront from true angina, having suffered, as only such cases ever, from attack after attack of the malady before the fatal one descended upon the scene. The reason for these facts is not so far to seek as it seems at first glance; for it is certain that it is in those who earn their bread by their mental powers that these affections are wont to develop, whereas in those who live by manual labor, angina is very rare. In my large hospital and dispensary experience of twenty years I have no recollection of seeing more than a few cases of true angina pectoris in the working classes, although false angina, neurotic or due to aneurism is more common. On the other hand, every one knows that the man who works with his hands presents to us constantly the most extraordinary degree of atheromatous changes in the sense of thickening of the walls and the deposit of calcareous matter in their walls and the development of cardiac hypertrophy or cardiac breakdown. It would seem that these changes just spoken of, rarely produce the actual high tension of the mental worker, in whom, as a rule, at least in my experience, the deposition of lime-salts in the vessels of the periphery is as rare as a spasm is common. The primary cause of the frequency of cardiac lesions in the well-to-do is, aside from high living and lack of exercise, the stress which is thrown upon the circulatory system by continued prolonged nervous and mental effort, which not only disturbs the supply of the circulatory system but calls upon those organs to deliver blood to a brain which, because of its activity, requires a large amount of blood delivered to it in rapid flow and under high pressure—a condition which is far in excess of that produced by severe physical effort, usually followed by a period of sound sleep and complete rest; whereas the former is as commonly followed by disturbed rest or insomnia.

before the National Association of United States Pension Examining Surgeons, Atlantic City, N.Y., June 6 and 7, 1904. From the Medical Examiner, Dec., 1904.

nia. Nervous tension soon produces arterial tension, and arterial tension soon results in cardiac strain and weariness.

Closely connected with these questions is the employment of many stimulants which are largely resorted to in modern life for the purpose of enabling the individual to accomplish work requiring mental activity, when nature, if left to itself, would demand rest, and if the rest was refused, would render the patient incapable of performing the labor which he attempted to carry out. In other words, it is by no means an uncommon thing for persons in middle life, and, indeed, at all periods, to perform an excessive amount of nervous and mental work, and when their powers begin to fail, to force themselves to still greater efforts by the use of drugs which possess the ability of unlocking and setting free nervous energy, which ought to be maintained as a necessary reserve. There can be no doubt that tea, coffee, alcohol and similar substances such as cola and coca, all of them permit a man to trespass upon his reserve energy, and there can also be no doubt that they are largely responsible for many of the nervous wrecks which are commonly met with, although in many of these persons it cannot be discovered that these substances have been used in excess, but have rather been employed at times when excessive weariness would have otherwise forced the patient to rest and recuperate. There comes a time, however, in which if the nervous system does not fail, the circulatory system, finding itself unable to meet the demands of the nerves as to blood supply, undergoes changes which are really those of premature age; the arteries become thickened and fibrous; their muscular coats also become thickened and are continually in a condition of spasm, and at this time it is by no means uncommon for both the physician and the patient to misinterpret the symptoms which the patient manifests, and reach the conclusion that excessive business activity has not only impaired his health, but that exercise and fresh air are the *sine qua non*. I say "misinterpret his symptoms" not in the sense that fresh air and exercise are not what he needs, but in the sense that the physician fails to recognize that the symptoms are primarily circulatory in origin, and, therefore, the patient is urged to take an amount of exercise which is far in excess of that which his circulatory system is able to stand. Indeed, it is the most common of observations to see the overworked business or professional man resorting to long bicycle rides, tennis, golf and other manly exercises with a vigor which is as mistaken as it is plucky, with the result that an attack of cardiac failure or other evidence of circulatory upset is precipitated sooner or later. The cardiac failure may be represented by a more or less well-developed angina, by albuminuria due to congested kidneys, by a bronchitis, or hypostatic congestion of the lungs, or again by attacks of vertigo due to a disturbed cerebral circulation. Indeed, it may be well said that there is no more pitiful sight than the man who is prematurely aged by overwork who thinks that he can rejuvenate himself by resorting

to the sports which brightened his mind and quickened his circulation in earlier life.

Again, the laity always, and the profession too often, fail to remember that every vital function is carried out at the expense of nervous energy and circulatory activity. The amount of energy which is expended daily in cardiac action, respiratory movement and digestive function is startling when it is estimated, and this energy can only be provided by an active circulation in the nerve centers and in the organs which are at work. Many of the circulatory failures which we meet with are seen in persons who resort to the pernicious habit of attending to business at the same time that they are taking food and carrying on digestion. And I have more than once seen active business men carry on some important financial problem, take food, and resort to violent muscular exercise in walking from office to office, during the same hour, thereby throwing a strain upon their circulation which was extraordinary. Often under these circumstances they unlock the reserve energy to aid their digestion by strong coffee or alcohol. Surely we should advise patients coming to us with early evidences of circulatory impairment to put aside these evil habits and should impress upon them the necessity of doing only one thing at a time and that in moderation, and where the circulatory change is quite manifest, a more or less prolonged period of rest should be insisted upon; for in the vast majority of instances we are too apt to prescribe digitalis or other stimulants for a failing circulation, and thereby whip it up to increased endeavor when in reality we should prescribe absolute rest and no medicine. The very drugs which we give for the purpose of improving the patient's condition only serve to use up the reserve to which we should be adding additional units. In many instances, too, the use of nitroglycerin to diminish the blood supply to the nervous system and to decrease the work of the heart is very much more strongly indicated than the use of cardiac stimulants.

There is still another condition of circulatory feebleness in which patients are wont to abuse themselves, and in which physicians all too frequently permit them to do so, namely, in the return to one's duties after a brief or prolonged acute illness, before the heart and blood vessels are qualified to meet the increased circulatory demands which such activities require. In certain instances, as in the case of acute rheumatism and influenza, the circulatory breakdown so speedily manifests itself under circumstances such as these, that he who runs may read, and perceive the folly which has been committed. But there are other conditions not so marked in their fulfillment which are constantly overlooked and which nevertheless bear equally evil fruit, although it may be at a later date. Almost every physician of large experience can look back and remember cases which he has seen where there was a history of typhoid fever, pneumonia, or other acute malady several years before, after which the patient speedily returned to work, and some months later began to show signs of circula-

tory feebleness, it being forgotten that mental activity demands quickened and more powerful circulation quite as much as does increased muscular movement, and while running may precipitate an attack of dyspnoea or palpitation which forces the patient to be prudent; brain work, which does not throw such an acute but a more prolonged strain upon the heart, ultimately produces more serious cardiac consequences.

In connection with these cases of cardio-vascular strain it may not be out of place to once more reiterate a fact which is becoming more and more recognized by the profession day by day; namely, that an intact vascular system, intact physiologically as well as anatomically, is as important to the life and welfare of the patient as is an intact heart, it being borne in mind that, after all, the heart is nothing but a dilated and modified portion of the blood vessels. In the treatment of many of these cases of cardiac feebleness, the patient not only needs rest more than drugs, but iron and arsenic more than digitalis and strophanthus. It is quite remarkable to notice the improvement which will take place in overworked men and women when they are given rest with these two reconstructive remedies, the cardiac stimulants being excluded; and second thought certainly shows that digitalis and similar drugs cannot be expected to markedly improve the nutrition of the heart if the blood itself which nourishes that viscus is relatively poor in cells and hemoglobin.

Finally, it may not be out of place for me to urge the employment of smaller doses of digitalis than are commonly used. It is perfectly true that where the heart is in serious difficulty, the administration of full doses of this drug is often most advantageous, but it is one which certainly tends to produce a cumulative effect, and, therefore, after it has been given in full doses for a day or two, it can, in my experience, be better administered in doses of from 3 to 5 minims of a physiologically tested digitalis three times a day than in the larger amounts so often used—the small doses maintaining the influences primarily produced by a larger one.

THE KINSHIP OF THE SKIN.

By J. LESLIE FOLEY, M.D., L.R.C.P., Lond., Physician to the Skin
Department, Western Hospital, Montreal.

THE skin is in touch with every organ of the body. It certainly covers them all. Like the crowned heads of Europe they are all related. Without the skin the functions of the body could not very well be carried out. Anatomically it is wonderfully and beautifully made. Its innumerable complexus of nerves, arteries, veins, lymphatics, et cetera, are admirably adapted to the carrying out of the perfection of its functions. The skin regulates the heat of the body. It keeps one in touch with the universe.

The study of dermatology is an intensely interesting one. To those artistically inclined its variegated colors, innumerable pathological lesions, anomalous cases, and the rare and new conditions continually cropping up add a zest to its study. It offers ample scope to the artist, draftsman, photographer, et cetera. Its beautiful and innumerable lesions can all be studied by the naked eye, but unfortunately the skin frequently goes out of the even tenor of its way and sets up a cutaneous disturbance, to wit, its sebaceous glands may become blocked up and set up an acne vulgaris or rosacea, or its sudoriferous glands may become clogged setting up a miliaria, sudamina, milia, or a hair may set up an inflammation within its follicle, a folliculitis, or some irritation from without may set up a dermatitis on its surface. It may be that an excess of blood, or a deficiency or a hyperæmia, or an exudation may so press upon the delicate tendrils of the cutaneous nerves and set up a pruritus, that pathognomonic sign of so many cutaneous diseases; or, perchance, some inward trouble, kidney, liver, stomach, may produce it. Then, again, by the process of suppuration, exudation and desquamation, resolution takes place and we again have the normal cutis.

A blow may set up a traumatic dermatitis, or perchance a scratch or exposure to wet or cold, or some digestive disturbance or other influences may arouse the otherwise normal skin into a diseased inflammatory state, to wit, a young infant may over-eat and immediately a erythema roseola may be set up. One may take a ramble through the country and set up an erythema solare; or, again, one may by accident touch the poison plant and set up a poison-ivy eruption. Then, again, the stomach, liver, kidney, the nervous system, the circulatory system, the heart, et cetera, may set up cutaneous eruptions, acne, eczema, pemphigus, herpes zoster, et cetera. It is an undoubted fact that a cutaneous eruption is often diagnostic of some internal trouble, to wit, sugar in urine is often indicated by a zanthoma diabetorum, liver disease, by zanthoma, et cetera. Heredity and climate often have their influence. Race, too, has its influence, to wit, why are keloid and leucoderma so prevalent amongst the colored race? The Pacinian corpuscles give us the sense of touch. The skin is cognizant of the different atmospheric changes, alterations of temperature, et cetera. The skin is related to all the other ologies of medicine. The specialist may shake hands on common ground.

Hyperidrosis localis, dysidrosis, pompholyx, keratosis palmaris et plantaris, et cetera, may be set up by unstable vascular equilibrium. The genito-urinary system, both in men and women, often give rise to a dermatosis, to wit, masturbation acne, sexual excitement often makes acne or eczema worse.

The sexual changes peculiar to women, pregnancy, lactation, periodical menstruation, often makes the eruption worse during these periods.

These disturbances may set up pruritus vulvae, eczema, erythema, psoriasis, urticaria. Sexual hygiene should be observed in these cases and pure, chaste, elevated thoughts inculcated. Some skins, on the slightest provocation, will give rise to bullæ. A slight scratch, et cetera, may set up a epidermolysis bullosa. It is a well-known fact that one can write ones name on some urticarial skins.

Gonorrhoea has produced a purpura, though not as yet noticed in the dermatological text books. Recently a case was described before the Montreal Medical Society by Dr. Hamilton.

Ptomains and leucomains have their influence on the skin. Some years ago, in an article I wrote on "Diet in Skin Diseases" in the Canada Medical Record, I said that in the skin domain many dermatosis would be produced by the ptomaine. In recent years, Brocq, of Paris, has described many dermatosis produced by auto-intoxication and auto-infection, producing the toxic erythemata. Still more recently, Schamburg has described dermatosis produced by food poisoning, meat, cheese, milk, vegetable foods, et cetera. The vegetable food poisoning may produce ergotism and palagra. Osler says purpura and erythema multiforme may be produced by ptomaine and leucomaine poisoning. Purpura and erythema by liver disease, cirrhosis of the liver, Bright's disease, et cetera. Albumenuria frequently produces erythema. Leube says that it will produce erythema.

Dermatology invades the dental region, and we meet with syphilitic laryngitis, gums, leucokeratosis of the tongue. It is essential to have good oral antiseptics. One dermatosis frequently runs into another, to wit, a psoriasis may turn into a pityriasis rubra. Psoriasis may turn into an epithelioma, et cetera. The skin, therefore, is in close relationship with all the different organs of the body, it is not a poor relation either, its place in the medical universe is important, unique.

Fifty years ago, dermatology was an unknown science, today it is one of the most important and progressive of the medical sciences. It is related not only to the internal organs of the body, but also externally to the atmosphere and climate. Not only is it affected by the innumerable microbes and bacilli which are in the skin itself, but by those microbes which float in the surrounding air.

O, shade of Willan and Bateman, what would they think if they looked down upon the present state of dermatology today. It would be an unalloyed pleasure to them to discern new skin diseases every day. The field was then a new one. Willan and Batman brought order out of chaos by dividing the different eruptions into primary and secondary lesions, the macule and papule, et cetera. How pleased they would be to attend a modern dermatological meeting. The days of the old humoral pathology are gone. Virchow, Rokitsansky, the great Hebra, taught dermatology along the line of pathological anatomy. Unna follows the line of histological pathology. The French, the Dartos idea. Although derma-

logy owes much to histology, bacteriology and pathology, the line of modern dermatology runs along the physico-dynamic, the force of nature. Electricity has already done much for dermatology, in electrolysis, hypertrichosis, naevus, et cetera, and the X-rays in malignant disease. Finsen's treatment, the ultra-violet rays, has done a great deal for lupus vulgaris. The trend of modern dermatology is along these lines.

The skin also acts as a detective, incriminating criminals, by its development of warts, moles, scars, which help to identify him.

Dermatologists go on in the even tenor of their ways, observing and reporting clinical cases, rare pathological specimens, and treating and curing cutaneous diseases.

In England we are indebted to Willan and Bateman, Sir Erasmus Wilson, Tilbury Fox, Crocker, Colcott Fox, Jamieson; in Germany to Hebra, Reimann, Kaposi; in Prussia to Lassar; in France to Besnier, Brocq; in America to White, Durhing, Hyde, Morrow, Fox, Stelwagon, Corlett.

American dermatologists have produced a rich literature on this department of medicine.

Upon whom will the mantle of Kaposi fall? While we are indebted to Willan and Bateman for giving us the macule and papule, we have got past the macule and papule stage and have reached the patchy stage, but, unfortunately, to our notice come many patches which exhaust our dermatological lore, no doubt. Who is to bring order out of chaos, to unlock the treasure of modern dermatology, solve its unsolved problems, unravel its Gordian knots, and, perchance, enter into the sacred precincts of a new discovery? What new metal, mineral or physical force, as yet undescribed, will be found to shake terror into the heart of the innumerable microbes and bacilli which go to make up so many of the diseases of the skin, or to cure malignant disease in it of all forms?

SOME CASES OF PLACENTA PRAEVIA.*

By W. C. HEGGIE, M.D., Toronto.

I PUT these cases before you, not because of any new method of dealing with this rare complication of pregnancy, but because, in my last hundred obstetric cases, I have been unfortunate enough to have had three cases. In some twenty years I have had six cases of Placenta praevia which I can recall, as I have lost the record of the first three, and as they happened prior to 1891, I cannot give the histories. Only to say, in passing, that the first case of complete Placenta praevia, at seven months in the recovery of mother and a living child who had grown into a fine boy ten years old when I last heard of him. The

*Read before The Toronto Medical Society.

HEGGIE: SOME CASES OF PLACENTA PRAEVIA.

two other cases were partial Placenta Praevias. In each case the mother lived; in only one did the child live.

Case 4, Mrs. W., primipara. I was called in September 2nd, 1903, on account of hemorrhage. I found the patient flowing profusely, in pain, rapid pulse, and very anxious. She was in bed, the foot of which I elevated, before preparing my hands for vaginal examination. She was about eight months pregnant. On examination the os was found dilated to admit one finger and the placenta could be felt at times. I plugged carefully with iodoform gauze and gave ten drops tr. opii. I waited an hour and, as the patient felt comfortable with a good pain, I left her, with instruction to call me at once if labor pains came on or any unfavorable symptoms developed. The child was then living.

I saw her again in six hours when the patient was doing well. Six hours later I removed the packing very slightly stained, and os much dilated. Put in fresh packing, which was again removed in twelve hours, no fresh stains and the os was contracted, so I left her without packing, but the foot of the bed was still elevated. I kept her in this position for four more days and as there was no more flow allowed her to get up.

On the 22nd of October, 1903, I was again called and found the patient in labor, the os dilated two fingers, slight hemorrhage, the placenta separated about two inches at lower border and the head present in L. O. A. position. As the hemorrhage was slight and the os dilated rapidly with powerful contractions, I did not interfere until nature completed the first stage, when I applied the forceps and delivered safely a healthy twelve pound boy. I at once separated and delivered the placenta by hand. Patient made a normal recovery. The foot of the bed was elevated throughout labor and for three following days.

Case 5. On September 7th, 1903, I was called in a hurry to Mrs. — mother of two children—and found her in bed with all the symptoms of collapse. I was told that, while standing in front of her house, suddenly, without warning, she felt something warm running from her, she almost fainted. Friends carried her to bed and elevated the foot of the bed while waiting for the doctor.

She said she was seven months pregnant. She was having slight face blanched and pinched, pulse rapid and feeble. As the external hemorrhage was not in my opinion sufficient to account for the severity of the symptoms, I suspected concealed hemorrhage. I could detect no foetal heart sounds or any sign of foetal life though an hour before mother had felt life.

I determined to induce labor at once, but, on examination per vaginam, made a discovery which changed my views entirely. The cervix was torn on each side clear up to the inner os, which was dilated enough to admit the finger. I at once packed the vagina

rile gauze and told those present that, on account of the tears in the mb, I could do nothing else because of the danger of rupturing it, expecting to watch and wait developments. I also told them that I suspected a placenta praevia which had separated at both the upper and lower border destroying the child from shock of asphyxia. At once there was a collapse, both husband and wife saying there was no fear, as they had been assured of that fact by the physician who attended her in her last confinement. For my protection, I at once told the man to telephone for Professor Adam Wright and that if he did not corroborate my statement, I would quit the case.

Professor Wright arrived within an hour after I first saw the patient. After examining the patient and hearing what I had done, he said that as I was rallying nicely to go on as I was doing. I did not mention the reasons, but said I wished him to make a vaginal examination. Not knowing my reasons, he thought it unnecessary but consented. I removed the packing when Professor Wright examined, but almost immediately I had to repack the vagina as any interference would probably rupture the uterus, on account of the several lacerations which of course was what I wished him to say. The packing was removed in six hours slightly soiled, and iodoform gauze introduced. This was changed every twelve hours stained each time, until the evening of the 9th, when at 7 p.m., contraction came on. I removed the packing and found the head presenting in D.A. position with os dilated and placenta separated for about three inches at lower border. Labor was quick with slight hemorrhage, so I allowed nature to complete the birth of the child when I separated the placenta at once, which was found adherent only at centre with a clot, beneath the upper portion, the size of an ordinary saucer. The child was dead. The uterus contracted nicely, there was very little increase in the size, and the woman made a normal recovery.

The collapse, in this case, was due, not to the loss of blood externally, but to the concealed hemorrhage, or as Dr. Wright put it on mentioning the case to him afterwards, "the collapse was due to shock from pressure of the clot and sudden enlargement of the uterus."

Case 6. Mrs. S., mother of five children, was seven months pregnant. She had been feeling poorly for a week, but before that had been remarkably well.

On the night of June 28th, 1904, after retiring, had hemorrhage without any warning. Could find no sign of foetal life and patient said she had not felt any for four days. The os was dilated three fingers. The placenta on lower segment of uterus was separated slightly. With very little difficulty, I got a foot and delivered rapidly a dead child and at once separated and delivered the placenta by hand. The patient made a normal recovery. In each of these cases, I attribute much of the beneficial results

to the position of the patient, as in all, the foot of the bed was elevated thus relieving blood pressure and giving rise to less hemorrhage.

I think these three cases, Nos. 4, 5 and 6, will show the folly of trusting to any one line of treatment and that the expectant treatment is not so bad as painted, and also that in at least one case, No. 4, it was the only safe and rational treatment.

In the six cases, the maternal mortality was nil, the foetal 50 per cent or putting it the reverse way, maternal recovery 100 per cent., foetal recovery 50 per cent. Since writing the above I have noticed an article in the New York and Philadelphia Medical Journal of September 17th, 1904 by Dr. Alfred King, Portland, Oregon, recommending elevation of the hip during the delivery in Placenta Praevia.

The idea of elevating the foot of the bed, in the treatment of Placenta Praevia, was not original with me; it was simply utilizing an old remedy used by every old woman in uterine hemorrhage, while waiting for the physician.

SYPHILIS—A RESUME OF TWO SYMPOSIA APPEARING IN VOLUME III., THIRTEENTH SERIES, INTERNATIONAL CLINICS; AND THE SPECIAL JULY NUMBER OF THE PRACTITIONER (LONDON).

By A. J. MACKENZIE, B.A., M.B., Toronto.

THE subject of Syphilis is of constant interest to the practitioner, no matter to what branch of medicine or surgery he devotes his attention, for the multiplicity of its lesions spare no organ, and its victims are found of all ages and in all walks of life. A vast deal of work has been done in this field, and is being done, but there is a great "terra incognita" and it is the purpose of this paper to call attention to some of the work of the later explorers as it has been described by them in the two publications mentioned above.

Etiology. Many investigators have tried to determine the exact causal agent in syphilis, but it cannot be said that their efforts have met with success. Various micro-organisms have been brought forward and for some time the most likely aspirant was Lustgarten's bacillus which was found in syphilitic lesions and apparently nowhere else but it was impossible to prove its specificity, and it is not now generally believed to be the true agent. De Lisle of New York and Jullien have proved that the blood and the blood alone contained the vehicle of contagion, and that the blood was contagious only before coagulation, there was developed coincidently with the process of coagulation an "alexine" with highly bactericidal properties which destroyed the active syphilis agent. Coagulation of the

blood could be prevented by transferring it to a neutral potassium oxalate solution of a strength not exceeding one in 1000. Examination of the blood plasma obtained by this method revealed the presence of non-motile bacillus, and a large number of small round bodies which seemed to be in constant motion. The microbe was polymorphic and varied from five to eight microns in length; sometimes these measurements were much increased, it became granular after ten days and assumed the appearance of the small round body seen in the culture.

The great difficulty in following out the life history of the suspected agent has been the fact that animals have proved to be practically immune to inoculation with the virus, symptoms indeed had been reproduced but differing widely from the manifestations in the human species, but recent experiments by Roux and Metchnikoff have been more hopeful. They inoculated a young female chimpanzee at the Pasteur Institute with virus from syphilitic lesions and there was developed on the twenty-seventh day at the site of one of the inoculations a vesicle which developed into an ulcer accompanied by indurated but non-painful inguinal glands, which Fournier among other authorities diagnosed as a typical syphilitic chancre. The animal lived for nineteen days afterwards and died from other causes without developing other lesions. A similar experiment was made some twenty-one years ago with a monkey by Martineau and Hamonic in which the development of secondary lesions was observed, and the second of these observers has since continued his experiments. Apparently it is in animals akin to the human species that this disease must be studied in the future but all the evidence seems to support the view that it is a microbic infection. The reason for the well-established non-infectivity of tertiary lesions is supposed to be that the germ has become attenuated, but this is no more than a surmise.

Pathology.—The phenomena connected with the primary sore still await explanation though it is well established that excision thereof has no effect in arresting the course of the disease; it would seem as if the infective agent has spread as far as the glands and there goes through a second incubation stage of no fixed period before it is capable of causing general infection. The tertiary lesions are still more difficult of explanation, some of the bacteria may remain dormant and suddenly awake to activity owing to some lowering of vitality. The variations in the virulence of the infections and their relations to the severity of the original sore has been the subject of much discussion, the consensus of opinion would appear to support the view that serious succedanea follow a very slight primary lesion in many cases because the patient has not been impressed with the importance of vigorous treatment, but doubtless there are forms of hereditary immunity and general health has a direct bearing on the activity of the virus.

Diagnosis.—The gravity of the social and domestic issues that depend upon the diagnosis of syphilis, to say nothing of the vital bearing it may have on his life and that of others, makes the recognition of this malady one of the most serious problems for which the medical practitioner must be prepared. The absolutely typical cases are perhaps easy, although the absence of secondary lesions his diagnosis is often set at naught by a quack, but many are atypical in appearance or position and wrongful decisions prove mortifying to both patient and physician. Williams discusses some of these puzzling forms in *Int. Clinics*, and first, the minute superficial penile ulcer looking as if it had arisen from a chafe or the rupture of a herpetic vesicle; it is shallow and may show little induration or involvement of the glands, the slowness with which it heals may give the only indication of its character. Second, there is a small fissure or crack situated on the glands, prepuce or fraenum—if it seems to rise into a ridge the minute sloping sides of which give a suspicion of induration, with the diagnosis for a week when the increase of the elevation will be a positive sign. Another form that presents a difficulty is a big pin-head sized papule which has not the distinctive color and which does not advance to a chancre; sometimes on picking it up it feels as if it contained a grain of sand and in this position a papule is always suspicious. Then there is the parchment sore of Ricord, situated on the dry sheath of the penis, it begins as a papule and enlarges into a plaque forming a superficial ulcer, which on healing or occasionally when it does not form an ulcer, gives the sensation as if one were picking up a piece of paper or parchment.

Again the invisibility of the lesion owing to its position inside the urethra may prevent diagnosis, here there is a characteristic brown, dirty grumous, serous fluid, while digital examination would reveal an indurated mass or the indoscope will reveal the lesion.

Genital lesions in women are usually less noticeable than in men, partly for anatomical reasons and because they are not sought for within the vaginal canal, but also because they are as a rule not so severe.

Extra-genital lesions are not regarded with the suspicion that attaches to those in the positions we have described and so are likely to be missed. The most common digital forms are the simple crack beneath the nail, the appearance of the ordinary whitlow and while the glandular condition may give a clue, we may have nothing to depend upon but the progressive increase or the stationary condition of the sore in spite of the usual treatment for a septic condition. The primary lesion may appear in almost any position and will frequently be missed or mistaken until other more characteristic signs appear.

The differential diagnosis of syphilitic eruptions is treated in *Int. Clinics* by Ohman-Dumesnil, with a series of plates illustrative of the most typical, among which are:

Roseola, the first eruption which appears, is a rose-colored and manifests itself in the form of a number of light-reddish macules irregularly distributed upon the thorax and abdomen, with lesions of the size of the little finger nail. It is sometimes seen upon the limbs, most frequently upon the flexor aspects; there are no subjective symptoms and it may often pass unnoticed. It may be mistaken for the ordinary febrile roseola, measles, the beginning of the scarlatina, or a medicinal rash, but attention to accompanying features should prevent error.

The miliary syphilide has a similar distribution, and consists of fine conical, discrete, papules of a red which suggests a mixture of sepia, just sufficient to tone down the scarlet.

The papular syphilide may be mistaken for the papular stage of variola, but the shotty feeling is lacking, there is a tendency to a distribution in circles, and there is an absence of subjective symptoms.

The varioliform syphilide is usually a mixed papular and pustular eruption, and corresponds very closely to small-pox, especially as some of the lesions may be umbilicated, but the essential point of difference is that in variola the vesicles are umbilicated, while in syphilis it is the pustules that are so marked, and the vesicular stage is lacking in the latter disease. The subjective symptoms are marked in small-pox and will always serve to confirm our diagnosis.

The acneiform syphilide closely simulates the papulo-pustular acne and its distribution is very similar; the points of difference are the color which is a dull red, there is no pain on pressure, and the lesions do not all develop in the duct of a sebaceous gland.

The circinate syphilide has an interesting resemblance to ring-worm and is composed of very small papules arranged in a circle with a clear centre, but there are no small scales present and there is no itching, while the lesions appear simultaneously instead of in succession as in ring-worm.

The psoriasiform syphilide, or the squamous syphilide, bears a close resemblance to psoriasis but may be distinguished by the lack of the silvery appearance of the scales and the pathognomonic bleeding point and it is not as a rule as indolent as the non-specific lesion.

The eczematiform syphilide should not be mistaken by a close observer, as Hebra's classical signs are all lacking with the exception of the primary lesions—there is no exudation, redness, edema or itching.

The scarlatiniform syphilide is often mistaken for the acute exanthem from which it derives its name, inasmuch as it may be accompanied by a fever, but the color is not so bright, the glands are harder, it is infrequent in children, and Koplik's spots are not found.

The lupiform syphilide may be distinguished from the tuberculous affection by treatment of a mild character, whereas true lupus needs caustic applications.

The ecthymaform, furunculiform and dermatiform syphilides must be studied in the light of their history and subjective manifestations and thorough investigation should lead to the correct diagnosis. The same may be said of "alopecia syphilitica"; in the latter specific treatment will speedily be followed by the renewed growth of the hair, a result which is not to be looked for in the cases due to trauma.

Syphilitic Fever.—This very uncommon manifestation of the disease is treated by Carriere, of Lille, in the "Clinics." He believes it is more common in women than in men, probably owing to the fact that the initial symptoms are frequently undetected in the former and so treatment is delayed. Twenty-five cases are found in the literature and the nature of the condition has frequently led to the diagnosis of typhoid; after a week or two of elevation of temperature a serious point of hyperthermia is reached, there is nausea, the abdomen is tense and painful with gurgling, and swollen spleen, the pulse is rapid and there is insomnia. This condition generally precedes the appearance of the eruption but may accompany the syphilides or even follow them. It yields rapidly to specific treatment; if this were not instituted the course might be fatal, but the diagnosis determines the therapeutic indications. Some writers have maintained that it is merely a form of syphilis with a predominance of gastro-intestinal symptoms, others that it is an association of the syphilis with typhoid, but the fact that it yields only to one form of treatment leads our writer to think that it is a separate disease. The similarity of typhoid is very marked, but we need nothing more than the serum test to distinguish typhoid from other affections, while the history will give a clue to the real cause.

Various causes have been assigned for the appearance of this condition in some cases, special virulence, secondary infection, and the condition of the patient; none of these are satisfactory to Carriere, but the cases have been so infrequent that no valuable conclusion can at present be reached.

Treatment.—Among all diseases syphilis is one of the few for which there is a definite therapeutic indication which is almost universally accepted and the discussion of treatment consists generally in a study of the various methods of the administration of mercury, and the course to be followed in so doing. The continuous method of Jonathan Hutchinson, consisting in the continuous administration of the drug for so long a period as is necessary for the cure of the disease, has been generally followed, in it the system is kept permanently under the mild influence of the drug which is increased to combat special symptoms as they arise. Recently, however, it has been held that this method leads to the patient acquiring a mercurial tolerance so that our weapon is blunted and too, presupposing as this method does, auto-administration, it is difficult to follow it out satisfactorily. Gottheil, of New York, believes that the "modified ex-

ant method," as he calls it, is more effective; the mercurial medication, is practically continuous during the entire active stage of the disease, moderate in amount, while the symptoms are quiescent, and is interrupted at times for periods sufficient to permit the system to recover from effects of the drug and to retain its susceptibility to its influence.

Three methods of administration are used each of which has its special indications and its advocates. The ingestive method is used in 90 per cent. cases, and probably will always be the favorite in ordinary circumstances. It is the simplest and easiest, but it has the objection that the amount ingested does not represent the absorption, that it tends to derange the stomach, and it is notorious that even the most intelligent patient will not certainly neglect his treatment after the disappearance of objective symptoms. The endermic method, including inunctions, fumigations and lotions, are peculiarly efficacious for the local treatment of lesions of the skin and mucosae, and is largely used as a means of general medication especially in Germany, but it is dirty, troublesome, and the quantity absorbed is even more uncertain than in the former method.

The hypodermatic method is regularly used by many of the most noted syphilographers, especially upon the continent, and they claim for it many evident advantages, it is absolutely definite in dosage, it is the most effective where important structures are threatened, it is cleanly and safe. The most important of all, in the opinion of Gottheil, is that the patient is under the control and observation of the physician. But, opinion is all in its favor, and there are grave objections urged against the method.

Choice of the Preparation. There are a variety of salts of mercury used in the treatment of syphilis, those used for injection are of two classes, soluble and the insoluble. The former are more readily absorbed and have to be given in frequent small doses, corrosive sublimate is most frequently used, none of the newer soluble preparations such as the salicylate having met with acceptance; but while soluble salts are less effective and are easy of absorption the necessity of frequent repetition has an insuperable objection to their use for injection. Of the insoluble calomel has been used much more than any other, but Gottheil uses the neutral salicylate in the formula:

Neutral salicylate of mercury	1 part.
Liquid albolene	10 parts.

Wickham, in the Practitioner, calls attention to the fact that we must determine for each patient the dosage of the drug which is the greatest he can take without reaction in the form of malaise and fever, and should be done by slowly raising the amount of the dose. Then, too,

we must not lose sight of the fact that the different salts vary in the amount of metallic mercury they contain, as follows :

Calomel	84.9	per cent.
Cyanide	79	"
Corrosive Sublimate	73	"
Benzoate	45	"
Biniodide	44	"

The technic is practically the same no matter what salt we choose. Fournier uses :

Sublimed Calomel ... ..	.50
Sterilized Olive Oil	10.00

Wickham prefers what is known as "grey oil" :

Purified Mercury	20	gram.
Sterilized lanoline	12	gram.
Sterilized Fluid Vaseline, q.s. to make 100 c.c.		

The injection is made deep in the muscular tissue of the buttock, high up near the intergluteal fold, it is repeated once a week, the site being varied, and all possible precautions are taken to procure asepsis. Wickham and Gottheil each give minute directions of the apparatus and technique which need not be repeated here.

Not all those who have practiced this method give it unqualified support and when we find that Fournier, who has used Calomel injections for many years and who is one of the greatest living authorities on this disease admits, even emphasizes, the objections, we must discount the statements of enthusiastic advocates who claim complete success and no drawbacks that can not be overcome by proper technique. The objections are the fever, inflammatory swelling and pain.

The fever following the injection of an average dose, five centigrams of calomel is moderate when it appears at all; 100 to 101 and generally passes off in a few days. In most cases the injection is followed by a certain amount of inflammatory reaction in the form of either abscesses or nodes; even with a faultless technique only a small proportion of cases escape these sequelae, but while swelling with redness and induration take place in the majority of cases, this is followed by the formation of abscess in but a small percentage of cases. Fournier says that nodes follow in two out of three cases, in size up to an orange, painless and disappearing in a variable time up to some months. Pain has been the greatest enemy of the treatment and peculiarly enough the statements with regard to this symptom have been in absolute opposition; turning to Fournier again we find that in a series of 1185 injections studied by him, 637 were either extremely painful, very painful or moderately painful, that is more than 50 per cent. while more than 25 cases were reported as intolerable.

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minor, or, at least, less frequent sequelae or accompaniments have been mentioned, viz., pulmonary embolus, hematoma, primitive haemorrhage, haemophilia or localized neuritis in the neighborhood of the injection. Then, too, the nodes left may be the site of gummatous growths.

would seem then, that this is not a method suited for routine treatment of the disease, but that it should be upon when we are confronted with a condition demanding immediate and powerful saturation with the drug, as iritis, neuritis or brain lesions or destructive lesions of the throat or larynx, but should we try to apply it to all cases we will Fournier says, "Your patient will drop you and your injections, more nor less."

Special Forms of Treatment.—At Wiesbaden the mercurial treatment inunction method, as is generally used in Germany—is associated with warm baths in a saline spring, and the director advances the theory that the drug is much more active in this way, not only on account of the rapid elimination and general health which follows the use of the baths, but also because of the formation of the double chloride of sodium and mercury which is the form in which all salts of mercury are absorbed in the system.

Aix-la-Chapelle the combination of bath and inunction is used, but the spring contains sulphur, and its opponents have contended that the action of the sulphide renders inert a considerable part of the drug. The authorities of the institution claim especial advantages from the opening and freeing of the pores which follows the thermal sulphur bath. It is pretty well determined that metals cannot be absorbed by the skin, and doubtless the heat assists in the process of inspiration on which the cure must depend.

Human Treatment.—Sir Alfred Cooper in the Practitioner describes a method of institutional treatment for tertiary syphilis where the ordinary use of mercury and iodide has been unavailing. The principal of the treatment consists in eliminating the poison from the system by sweating; the course lasts fourteen days; the patient is kept in a room at a temperature of 80 F. The evening before commencing the treatment these pills are administered:

Hydrarg. Subchlor	grs. ii.
℞. Col. co.	grs. v.
℞. Hyoscyam	grs. ii.
ft. pil ii.	

the diet is devoid of sugar, spices, fruit, etc.

the first four days of the treatment the patient drinks half a pint of the following decoction as hot as possible at 9, 10, 11 and 12 a.m.

Decoction No. 1.—*R. rad. sarsae contus, iv. ; sem. anisi contus ; serr foeniculi contus, aa. oz. i. scr. i. ; fol. sennae, oz. i. ; rad. glycyrrh, contus iv. Add in a linen bag : Sacchar. alb. ; alum sulph., aa dr. i. scr. i. hydr. subchlor, dr. i. scr. i. ; hydr. bisulph. rub., scr. i. ; aquae, Cong. ii Boil down to one gallon.*

On the same day at 3, 4, 5 and 6 p.m. the patient drinks half a pin of decoction No. 2 cold.

Decoction No. 2.—To the dregs from Decoc'n No. 1 add: *Rad sarsae contus., oz. ii. ; cort. limon. contus. ; sem. cardamom. contus. ; rad glycyrrh. contus., aa dr. i. ; aquae, Cong. iii. Boil down to one gallon*

The patient is kept in bed except for one hour every evening. On the fifth day he is allowed to get up and dress. In the evening two pills are administered as before and the next day the decoctions taken again and this goes on until the 15th day. The whole description and the formula suggests miracle-working institutions from across the line, but we have Sir Alfred Cooper's authority for the claim that it is efficacious, not only in intractable cases of tertiary syphilitic lesions, but also in gout, rheumatism, and similar affections.

FIVE CASES OF SARCOMA SUCCESSFULLY TREATED WITH X-RAYS.

By JOHN McMASTER, M.D., C.M., Toronto.

CASE 1.—A lad, age 14 years. The disease began in the region of the right superior maxilla in April of 1902. It grew rapidly and soon presented a large mass, pushing the nasal septum to the left as well as all the nasal structures, and partially closing the right eye. The roof of the mouth was pushed down level with the teeth and it was difficult to open the mouth sufficiently to receive food. X-ray treatments were begun in June and fifteen vigorous applications were made in 42 days. The treatments were made quite wide of the limits of the growth and were given both on the outside and through the mouth. A decided reaction followed the raying, causing a superficial desquamation and some destruction of superficial tissues. At this stage there was some perceptible diminution in the size of the growth with a decided relief from the constant boring pain. The burn caused but slight discomfort and made rapid progress towards recovery. Two weeks after the fifteenth treatment Dr. Teskey removed the superior maxilla bone, entirely dissecting off the overlying skin and muscles of the cheek and replacing them in situ retaining these superficial structures in position by sutures and dressings. The doctor made the remark after the operation that "it would relieve him for a while, but would not cure him." A profound anaemia resulted from the shock of the operation and as soon as possible the raying was

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n again. Half a dozen more treatments were given as close together considered safe without producing a burn. Gradually the face healed and the deformity resulting continued to diminish till at the present it is not much more than noticeable. The boy has now developed into a big fellow, and he has had a suitable plate made which not only enables him to eat satisfactorily, but also gives symmetry to the outlines of the face. It will soon be three years since this case was discharged and there is no sign of recurrence yet. On examination it proved to be a round cell sarcoma. The question arises what was it that stayed the growth in this case? The operation or the X-raying or both? There were no toxicines used. The technic used in this case was not what I would employ in the same case now. The radiance was abundant and the tube at the right vacuum, but the distance of the tube was not great enough at the time of raying at fault. However, great destruction was done to the superficial parts of the growth by the raying, and I believe the vessels were closed and the capillaries obliterated in the overlying tissues and were dissected from the cheek bone. If any cells of a sarcomatous nature remained after the operation these were destroyed by the after raying, but the metastasis was prevented by the raying prior to the operation.

Without the operation this case could not likely have been successful as the growth was concealed in the antrum and behind plates of bone through which it could hardly be conceived that the rays would produce the metamorphosis required.

Case 2. Mr. W., age 48. A large robust man, a farmer by occupation. A small lump appeared in the region of the parotid gland in October 1902. In November, under cocaine anaesthesia, it was removed by Dr. Bruce. On examination by the microscope it proved to be a round cell sarcoma. Dr. Bruce on learning this at once performed a more extensive operation under general anaesthesia, removing as much of the surrounding tissues as possible. Considerable disability resulted from this operation—paralysis of the muscles of expression, inability to open the mouth to a very limited degree, ptosis of the eye lids, want of sensation in the region adjacent to the excision. As soon after this radical operation as the patient was able to come, X-ray treatments were begun. He received fifty treatments between December 1st, 1903, and the following February. At first they were given three per week and after six weeks once per week. The technic was the best adapted for the case known. No toxicines were done at any time to the tissues. There was some breaking down of tissue a few weeks after the raying began, but the discharge ceased and the wound healed kindly. The stiffness about the jaw improved as the treatments went on and the scar tissue, at first quite prominent, melted away, till to-day you could scarcely tell that there had been an operation.

Four months after the raying began a small abscess appeared quit deeply situated in the region of the parotid. It was evident that some of the underlying tissues had broken down and suppuration was imminent. I opened into the affected part and evacuated a small amount of matter and drew out a portion of suture with a knot on it. Over two years have elapsed and there is no sign of metastasis or return in situ. Hope is arising that this man is cured. These are the facts and every one can draw his own conclusions. I will state my experience. I have watched a considerable number of sarcoma cases of the parotid region and I cannot recall one that has been cured by operation alone. I can count up a large number that have been operated upon but they are all dead. Several prominent surgeons of America have stated that operations on such cases are uniformly unsuccessful as recurrence and metastasis will follow in all cases of sarcoma of the neck.

Case 3.—Mr. R., age 54, strong vigorous man. In the fall of 1901 a lump began to make its appearance in front of the ear. It caused considerable discomfort and rapidly increased in size. It was quite deeply situated beneath and below the zygoma, reaching up into the temporal region. His family physician in the country referred him to Dr. Teskey who excised the growth as perfectly as possible by removing the arch of the zygoma. A long incision was made and a very careful dissection of what appeared to be infiltrated tissue done. The wound healed rapidly, but, unfortunately, a new development resulted within a few months in the site of operation. The excised growth was found a small celled sarcoma by microscopic examination. Further operation was thought inadvisable and in January, 1903 Dr. McCullough, of Alliston, sent him for X-Ray treatment. He received about a dozen energetic treatments when there was marked evidence of softening in the growth. I advised the use of Coley's toxins in conjunction with the rays and they were begun about this time and pushed to the limit of tolerance. The softening progressed and began to appear high up in the temporal region. When it was evident that there was fluid in the location it was opened and drained, several ounces of matter being evacuated. The raying was continued at intervals up to March 1903. Several times a transient erythema that scarcely amounted to a dermatitis was produced. Great relief was soon experienced after the raying was begun, and this continued the whole time with the exception of a few weeks before the abscess was evacuated. The result is all that could be desired now, the scar tissue is scarcely noticeable and the disability of the jaw and muscles is greatly improved. As the time is gradually passing in since the discontinuance of treatment, a cure is being hoped for with increasing confidence.

Case 4.—Mr. C., age 67, a very strong and vigorous man for his years. A diffuse swelling began to form about the angle of the jaw extending down the neck to the clavicle and up behind the ear for about two inches. This was in the spring of 1904. It grew very rapidly and became very hard, almost as hard to the touch as a bone. There was little or no pain from it only that the jaw was fixed and with great effort could be opened sufficiently to admit of food taking. Dr. Bruce considered the case inoperable and referred him for X-Ray treatment. It seemed hopeless at the start to begin raying such a large and apparently solid mass. The case was faithfully rayed for four months and it was only a few weeks when a marvelous change began to come over it. In its upper part softening and suppuration took place and the growth melted away rapidly. Later on the same result was brought about in the lower part of the growth. About the third month of treatment the use of Coley's fluid was begun and continued for five weeks. It appeared to have no effect whatever on the patient and was discontinued. A very superficial dermatitis was produced several times but an intermission of four or five days always cleared it up. An application of stercate of zinc was made repeatedly to the part with ichthyol. This, it is believed, enables the skin to endure more raying. The discharging sinuses healed up under the treatment and the mass disappeared and the stiffness with it. During the breaking down process all the emunctories were kept active and the patient was put upon an alterative and tonic course of medication. There was but slight evidence of any toxæmia from absorption while the growth was breaking down. After the suppuration had ceased his health improved and his body weight increased. A microscopic examination of some scrapings from the edge of the suppurating sore was made and the growth pronounced a round celled sarcoma. This was Dr. Bruce's diagnosis months before this examination was made. The case reported last week for inspection and examination and there is not the slightest evidence of anything ever having been wrong with his neck. No trace of the openings which discharged freely for weeks and no lack of function in the jaw or ear.

Case 5.—Miss H., age 21, consulted me in December, 1902, for a growth in her face and neck. She gave the following history: A small lump appeared on the side of the head in front of the ear. It was about the size of a hazel nut in September 1900, when it was removed by a surgeon of this city. On examination it proved to be a small round sarcoma. In a few months it recurred in the same location when it was again removed, but by a much wider and more extensive operation. In a few months it returned again and grew more rapidly than before. Discouraged with the result of operations she went to Markham and had it removed with plasters. This took between three and four months to completely destroy the growth which was as large as a cocoanut. This case is still

under treatment and improving. 'It will be fully reported on a future occasion.

In none of these cases did auto-intoxication present any difficulty. The healthy tissues in all possessed a remarkable degree of resistance to the destructive action of the rays. In all of them X-Rays irritation was difficult to produce and being produced they reacted promptly. They tolerated large doses of radiation for a protracted period of time. High expectation of success was not looked for by either the patients or myself. The patients, however, were favorable ones, inasmuch as they gave implicit obedience to all requirements. These cases are presented because they naturally fall into a class which shows the fullest degree of affirmative evidence of the X-Ray when properly and persistently administered in recurrent sarcoma. These cases were undoubtedly sarcoma of the most malignant type. Both clinically and histologically they showed this.

While the toxins were used in some of the cases towards the end of recovery, there is complete evidence that the results obtained were due to the X-Radiations. It seems to me, therefore, from the treatment of these cases that we are justified in believing that in this agent, when intelligently applied, we have a curative measure that is entitled to the respectful attention of the medical world. They demonstrate that the emanations from a properly excited Crookes tube in such intervals and quantities constitute a therapeutic agent in the most desperate cases known to the profession. The report of the fifth case will be given more fully at some future time and it is more remarkable than any of the above.

SOME POINTS IN THE ADMINISTRATION OF ANAESTHETICS.

By GEO. H. CARVETH, B.A., M.D., Anaesthetist, Toronto Western Hospital.

AFTER an experience of twenty years in the administration of anaesthetics, I offer these suggestions in the hope that some few of them may be valuable to beginners in this important branch of medical work. During that time no patient has been refused and no death has taken place, either at the time of administration or afterwards from the effects of the anaesthetic.

Choice of Anaesthetic. On account of the nervous temperament of patients in this country and the safety with which ethyl chloride and nitrous oxide are administered, local anaesthetics are not generally used, but short operations are sometimes done under ether or ethyl chloride spray or cocaine injections. A few major operations, such as the removal of the thyroid, etc., have been done under injections of weak solutions of cocaine and morphia.

As to general anaesthetics, nitrous oxide followed by ether is made use of in most cases. except when bronchial irritation is present, when chloroform is used. Chloroform is made use of in the extremes of life, say under six and over sixty years. When the patient is doing badly under the first anaesthetic chosen, whether that is ether or chloroform, a change is made to another and generally with success.

Preparation of the Patient.—Rest in bed for some days before time of operation is advised, the last two days of which light diet is given and one meal is withheld just before operation. A laxative should be given two days before operation, but no strong purgative at any time is allowed.

The operation should be done in the morning if possible, the earlier in the day the better. The patient should be encouraged and cheered up in every way possible before commencing the administration of the anaesthetic; and no patient should be anaesthetized who greatly fears the results, rather another time should be chosen.

Water (hot or cold), as the patient wishes, should be given in large quantity before and after an operation, and in some cases washing out the stomach before hand has been of great service.

The anaesthetic should be commenced and gone on with in the place in which the operation is to be performed, and as little movement of the patient as possible should be permitted after the administration of the anaesthetic is stopped. Quick and gentle removal back to bed seems to be the best plan.

Management of the patient during time of administration.—The temperature of the surroundings should be between 65 degrees and 70 degrees. The anaesthetist should devote his whole time and energy to the administration, keeping one finger on the patient's pulse all the time and closely watching the patient's breathing, eyes, lips and general appearance. A clean and disinfected inhaler should be made use of.

Chloroform should be given drop by drop by means of a towel or piece of lint, leaving the eyes uncovered; ether by means of a cotton covered cone, the face being protected from chloroform by vaseline and from ether by a face piece of gauze. If available, Barth's instrument for nitrous oxide-ether will be found very satisfactory.

A trained nurse should remain with the patient at least two hours after the anaesthetic is stopped. Keep the patient on his side or nearly in this position when the nature of the operation will permit of it, to allow mucous to come out of his mouth easily till consciousness is complete.

When water is given in quantity beforehand, and afterwards, the patient is kept in the open air or practically so, and the patient disturbed

very little after the anaesthetic is stopped, nausea and vomiting are almost unknown and the usual remedies to stop sickness are not required.

Fees.—Considering the risks of administration, the time and energy required, the anaesthetist should receive at least an amount equal to one-third of the sum charged by the operator.

Use of Drugs.—Morphia given beforehand is seldom or never necessary, and strychnine should only be given when called for by the weak condition of the patient, and not as a routine practice.

ERYSIPELAS COMPLICATING LABOR TREATED BY ANTI-STREPTOCOCCIC SERUM WITH RECOVERY.

By A. B. HANES, M.D., Blenheim, Ontario.

THE case I herewith report has been of such intense interest to me that I publish it with the hope that my experience in this case will encourage some brother practitioner in the hour of dire necessity when he feels the battle is against him.

Mrs. W. H. E., aged 28 years, multipara, eight months pregnant, on the evening of December 24th, presented a well marked erysipelas of nose and left side of the face, the left eye being swollen nearly shut, the rash extending from ala of nose on left side over the left face and cheek nearly to the ear, across the root of nose beneath the right eye, blebs on the left side of the nose and eye-lid. She gave a history of not having felt well for some months, complained of aphthous sore mouth, had chilly sensations for the past three days alternating with fever, a feeling of fulness and burning in the face at the seat of the fiery rash which was very tender to touch. She had headache, pain in the back and limbs, coated tongue, temperature 102 1-2 degrees, pulse 120.

Next day the eyes were both swollen completely shut, Could not see at all. Disease extending up the forehead, its margin being marked by a distinct ridge which advanced as the disease spread. It also extended over the right side of face and possessed a brawny feel, tongue dry and brown in middle, very delirious, urine frequent and scanty, no albumen, pulse 120, temperature 104 degrees.

December 26. The disease extended up the forehead and to the right ear, but not involving the ear. Symptoms in no way ameliorated, temperature 105 degrees, when during the night she was taken in labor, the baby being born about 7 a.m. on the 27th. At this time her temperature was 103 1-2 degrees, pulse 110.

December 27. The erysipelas extended to and beyond the roots of hair on the forehead, and the whole face from ear to ear and above the lips was extensively involved, the swelling of the parts first involved showing signs of subsiding though extending at the margins. The tongue

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zels loose and the patient very delirious. t eye a little. Erysipelas had extended o involved. Right ear and right side of ollen. The tongue still dry and brown,

r enormously swollen, no fresh involve- ning moist, delirium gone, appetite re-

gone, urine abundant, disease not spread-

involved and left side of head, which , urine scant.

ine, which was abundant when drawn e compelled to continue for three days. good, face, lips and ears much swollen. mewhat swollen still, and eye lids show ses. Patient feels well, except for sore again.

e streptococcus which produces erysipelas causes septicæmia after labor; and that and hands with such tenacity that, as ttend a case of confinement while treat-

ree or four days ill with a severe facial xitive delirium and enormous swelling of egrees, pulse 120, is taken in labor and ccic infection. ,

n a house, already germ laden, and from servant and her nurse had, during her tive homes, each suffering from a folli-surroundings, was a question the favor-ital importance to the patient.

sal we all worship, but, under circum-ntent with the strictest asepticism would he death of the patient a few days later

dvanced, but previous to delivery, the given a good anti-septic scrubbing, and 1e vulva, no vaginal examination having ent was completely disrobed and carried the room in which she lay, while fresh and a large wad of sterilized cotton was vulva, the nurse using sterilized rubber

gloves to change the dressings and sponge the vulva with anti-septic washes.

Then anti-streptococcic serum was used liberally for the double purpose of protecting the patient against infection, and arresting the progress of the erysipelas, both of which it accomplished admirably.

The temperature chart showed that within twenty-four hours of beginning the administration, there was a decided effect upon the pulse first, then on the temperature, tongue and delirium. The baby was born on the 27th, and three doses of serum were given on the 28th, when the pulse and temperature both went down; at this time, the serum was being given every six hours on the 29th, three more doses were given every six hours, and, as the delirium and temperature were declining, the interval was lengthened to eight and then twelve hours, so that in four days after twelve doses of serum the temperature was subnormal never to rise above normal.

The only unpleasant symptom attributable to the serum was retention of urine, which lasted three days, and the sub-normal temperature for a few days.

The erysipelas continued to spread for four days after the first administration of the serum, even though the constitutional symptoms showed an improvement, and I am not prepared to say the erysipelas would not have pursued as favorable a course if serum had not been used; but I think from previous experience it would not, and I certainly will use it in my next severe case of erysipelas. But it is of its protective influence I wish especially to speak.

This patient was debilitated to such an extent that she was suffering from aphthous sore mouth. She was surrounded by such unhygienic influences as to develop a severe erysipelas *de novo*. Three inmates of the house contracted follicular tonsillitis—a streptococcic affection—though there were no other cases in the section; so that one would expect little resisting power in the patient at the time of labor, even without the proximity of so contagious a disease as erysipelas. While due precaution was adopted to prevent germs finding entrance to the vagina, I can not think the parts escaped contamination under all the circumstances.

There was no pelvic involvement, thanks to the serum, and the patient made an excellent recovery.

This is an example of serum conferring immunity against infection, and of its value in this field. I cannot speak too highly.

As a curative agent in infection following labor, the results have been variable in different experimenter's hands, which may be because of delay in administration, or it may be due to insufficient persistency in its use; but, as a prophylactic, there can be no doubt of its efficacy. Vaccination

furnishes immunity, but is not curative, anti-toxine furnishes immunity and is also curative, but it must be administered early in the disease and in sufficiently large doses. No fact is better established than that the efficiency of anti-toxine is in direct proportion to the earliness of its administration; and, if anti-streptococcic serum is a certain prophylactic, as this case seems to prove, it appears reasonable to assume that it is equally as curative as anti-toxine, if it is prescribed sufficiently early and in sufficient doses.

GOVERNORS' FELLOWSHIP IN PATHOLOGY. MCGILL UNIVERSITY.

By the resignation of Dr. Oskar Klotz this fellowship, instituted in 1899, has now become vacant. Dr. Klotz is a graduate of Toronto University, and has during the tenure of his fellowship done much valuable research work including studies upon bacillus isolated from water agglutinating with high dilutions of typhoid serum, and on the isolation of a motile micrococcus causing an epizootic among rabbits, (both published in the *Journal of Medical Research*), together with several studies in morbid anatomy. His most important work, shortly to be published, is on the part played by soaps in the process of pathological calcification.

The Fellowship is open to graduates in medicine who have done some previous medical research work, is tenable for two years with a salary of \$500 per annum.

HYSTERICAL AMBLYOPIA.

Fish, *Ophthalmology*, October 1904, gives the histories of a number of cases which would evidently be classed as hysteria. However, upon closer examination, it was found, in each case, that the cause of the trouble was located in one of the frontal sinuses. After appropriate treatment the symptoms disappeared.

Fish regards frontal sinusitis, subacute or latent, as a much more prevalent affection than is usually supposed.

"These patients suffer from asthenopia, owing to a reduced range of accommodation or a diminished power to maintain prolonged accommodation, and, furthermore, they are subject to frequent attacks or aggravations of these distressing symptoms when the sluggish pupil and ciliary muscle cause them great discomfort."

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

THE THERAPEUTIC VALUE OF YEAST.

Yeast has long been used as a therapeutic agent and recently the more intelligent study of its powers has led to a definition of the qualities which it possesses, and glycolytic, phagocytic, antitoxic and bactericidal powers are ascribed to it. A carefully dried fresh yeast is the most suitable and doses of 25 centimetres three times a day may be given.

The chief therapeutic indications for yeast follow :

1. In glycosuria, 50 grams or less are employed daily, diluted with water, and given in divided doses at meal times. If diarrhea follow, the dose is reduced. The glycolytic power of the yeast is exerted throughout the alimentary canal, and the treatment is allowed by diminution or disappearance of the sugar from the urine. Often there is a decided, but temporary, increase in the body weight under the use of the yeast.

2. In albuminuria not due to renal change, the same treatment is followed in many cases by diminution in the amount of albumin. The treatment is of no value where renal degeneration is under way.

3. In pyogenic infections like furunculosis and carbuncle. In furunculosis, three to six teaspoonfuls per day are employed, according to the tolerance shown by the patient, and some clinicians have reached the dose of four tablespoonfuls a day. The boils in process of formation dry up and fail to suppurate, and fresh crops are speedily aborted. Lassar has had good success with yeast in the ordinarily inveterate crops of boils common in diabetic patients, the good results being probably due to the combined glycolytic and antipyrogenic powers of the agent. In carbuncle, even if fully developed, prompt improvement occurs. "The pain is relieved or entirely ceases after the second day, the edema and lymphadenitis on the third or fourth, then suppuration becomes less and finally ceases, and on the seventh or eighth day the carbuncle cicatrises, leaving merely an induration which does not disappear till some weeks have passed. If at this period the administration of yeast is abruptly suspended, the carbuncle tends to relapse; hence it is advisable to continue the treatment till the induration has disappeared." (Laumonier).

4. In recurrent stye of the eye, Terson has observed constant improvement under the yeast treatment.

5. It has been used in the treatment of vaginal leucorrhea, both simple and gonorrheal, by injections diluted with water, and by application

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membrane followed by tamponade. The reports on this treatment vary; some observers reporting prompt and continued improvement, others temporary improvement followed by an intractable pruritus, possible that the pruritus may have been due to using decom-

pression. In obstinate constipation, yeast has been successfully employed in doses of 25 centigrams of the dried form two or three times a day. Similar effects are noted by the second day.

In gastro-enteritis in adults and children, many observers have had good results. Three teaspoonfuls of dried yeast, diluted with water, given in divided doses through the twenty-four hours, are directed for an adult and correspondingly smaller doses for children. Other observers obtain better action is secured by using the yeast by enema, after flushing out and instituting a fluid diet.

Various observers have noted beneficial results in cholera, scarlet fever, measles, purpura, cancer, and tuberculosis, but the reports are not sufficiently positive to warrant one abandoning older remedies in such cases.—The Medical World.

STANDARD RECORDS OF THE LEUCOCYTES IN NORMAL BLOOD.

Boston and Medical Surgical Journal, December 29th, Hewes, describes a series of experiments undertaken for the estimation of the normal number of leucocytes in human blood. The subjects, thirty in all, students at the Harvard Medical School, and the counts were made in the forenoon and afternoon; the method used was that of stained blood smears counted by the Thoma-Zeiss apparatus.

Results show that the number of leucocytes is almost invariably higher in the mid-afternoon than in the mid-forenoon in the same individual, the amount of increase being from 3,000 to 4,000 per c.m.m., the results of the experiments being from 6,200 to 18,100 forenoon and from 15,600 afternoon—the high limit in the forenoon cases occurred in one case, in no other did it exceed 12,000. The study of the differences of cells showed the following proportions:

leucocytes,	}	Basophiles 21 to 49 per cent.
nonnuclear cells,		
normal cells,		
lymphocytes	52	78 per cent.
neutrophils (eosinophiles)	0.5 to	6 per cent.
erythrocytes	—	to 1 per cent.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division; Surgeon Toronto Western Hospital.

EXTERNAL URETHROTOMY.

In a recent article, Reginald Harrison, of London, states that external urethrotomy seems specially applicable to the following classes of cases:

1. To resilient and rapidly contractile strictures in the deep urethra which, like burn-scars, are unamenable to stretching or dilatation, and where a splice or an interval of new tissue is required within the circumference of the contraction.

2. In cases where the wound made by an internal urethrotome out of proportion to the natural drainage possibilities of the urethra, such a wound may be so made within this canal as to never drain completely either in regard to urine or its own discharges, the result being much the same as in accidental lacerations of the urethra.

3. In cases of stricture complicated with urinary fistula and sinus. The division of the stricture from without and the formation of a single opening for urine drainage communicating directly with the bladder often leads to a speedy recovery in these cases.

4. In cases of stricture with extravasation of urine, the division of the stricture with direct drainage of the urine from the bladder as well as from the surrounding tissues is a matter of immediate importance.

5. In some rare cases where internal urethrotomy performed for stricture is rapidly followed by acute symptoms of impending death from septic absorption through the urethral wound. Here if an external urethrotomy be done and a large drainage tube inserted into the bladder the patient may promptly improve.

In the operation of external urethrotomy, Harrison attaches importance to the careful observance of the following three things:

1. The use of a guide in all cases of external urethrotomy for stricture.

2. The utility of internal urethrotomy as an immediate preliminary to the external operation. This is shown by the ease and completeness with which the latter operation can be carried out on a larger staff than could otherwise be used.

3. The necessity for providing the most efficient and cleanly kind of urine and wound drainage.

ASEPTIC CATHETERIZATION OF THE URINARY PASSAGES

In the *Journal of the American Medical Association*, September, 1901, M. Krotoszyner and W. P. Willard summarize the methods of catheter sterilization which prove to be safe and simple as follows:

1. Soft rubber catheters are rendered sterile by being boiled five mi-

ites, preferably in sodium chlorid solution, care being taken that the solution, fills the lumen of the catheter. As a matter of precaution the catheter should be washed with soap spirits and running water after use.

2. Hard rubber and silk and cotton woven catheters should be boiled five minutes in a saturated solution of sulphate of ammonia. Each instrument should be wrapped separately in gauze or a towel, or, if several catheters are to be sterilized, in such a manner that their surfaces shall not come in contact with the sides of the vessel or other catheters.

3. Ureter catheters can be folded and wrapped in a towel so that their surfaces are kept apart and boiled for five minutes in a saturated solution of ammonium sulphate.

4. Cystoscopes should be sterilized by first washing them in soap spirits and water, then vigorously rubbing them for two minutes with two different pieces of gauze or cotton wet with soap spirits, and then with alcohol, for one minute. The channel of the catheter can be cleansed by means of a brush, first brushing with soap spirits and then with alcohol. Instruments can be kept aseptic if they are snugly wrapped in a piece of gauze or towel wet with soap spirits.

TREATMENT OF THE STUMP IN APPENDECTOMY.

In a letter of December 17th last, to the editor of the *St. Louis Medical Review*, Ochsner says:

"It is my opinion that any one of the dozen different ways of treating the stump is perfectly satisfactory and that it does not make a particle of difference which one of these methods may be chosen. The objections to each one of the various methods which have proven to be eminently satisfactory in practice are simply theoretical and do not count upon the fact that the stump of the appendix is in a location in which nature is accustomed to do a great deal towards repair of pathological conditions. I have at various times tried all the different methods that have been described and have found the results equally good, if carried out accurately, in nearly three thousand appendectomies."

GYNAECOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

A FURTHER CONTRIBUTION TOWARDS THE STUDY OF THE NATURAL HISTORY OF TUBAL GESTATION.

In the *British Medical Journal* of October 29th, Dr. Augustus W. Addinsell, of London, has an article on this subject. He says the objective and subjective phenomena, associated with the recognition of extrauterine pregnancy, are so classic that they need not be referred to, but a lively

controversy still rages round the question of treatment. Practically, it amounts to this, ought we to operate at once or wait? During the last four years the doctor has been associated with 15 cases. Four of these were operated on. Eleven were treated by the expectant method of absolute rest in bed. All 15 cases have recovered.

The writer states that of the four cases operated on, three were by abdominal section, and the sac was removed. In the fourth case, as supuration had taken place, a free incision was made into the vaginal roof and the abscess cavity drained. In one of the three abdominal cases, symptoms of appendicitis came on, and the operation was undertaken for that complaint, otherwise the patient was doing well under treatment by rest alone.

Dr. Addinsell believes the majority of cases that come to hospital are sent in as cases of miscarriage by the doctor attending, and this is the usual diagnosis of the patient herself, who, having missed one or more periods and experiencing the subjective symptoms of pregnancy, naturally regards the onset of a colored discharge, accompanied by pain, as a miscarriage. Herein lies the danger. The woman has recovered from her first internal hemorrhage. He also believes it to be quite exceptional for the primary internal hemorrhage to be fatal; he has never known it to be so in a single case.

The doctor sums up his paper as follows:

1. If the patient has rallied from the first shock of bleeding and there is no evidence of it still going on, wait.
2. If the bleeding returns, operate at once by the abdomen.
3. If the diagnosis is made of tubal pregnancy, before rupture or abortion, operate at once; but this is very difficult to diagnose and is very rarely done.
4. If tubal abortion or rupture is recognized and the foetus is still living in the early weeks, operate.
5. If an haematocoele has formed in the pelvis, it is probably shut off by adhesions from the general peritoneal cavity, wait for absorption.
6. If the haematocoele becomes infected, open freely through the vaginal roof. The *bacillus coli communis* will usually be found to have been at work with its characteristic odour; so let your drainage be very thorough.

TECHNIC OF FIXATION OF PROLAPSED KIDNEY.

Dr. Augustin H. Goelet, Professor of Gynecology in the New York School of Clinical Medicine, writes on the above subject in the November number of the *American Journal of Surgery and Gynecology*. He says experience proves the necessity of the operation, especially in the face of the inadequacy of all mechanical appliances, such

A gauze drain is inserted about the lower pole of the kidney and brought out at the lower angle of the wound. This aids in supporting the organ, taking the strain off the surrounding sutures during the first forty-eight hours, after which time it is removed.

Dr. Goelet says among the many reasons why nephropexy may prove a failure, the chief ones are as follows:

1. Postponement of the operation until the kidney is seriously disabled or an incurable pyelo-nephritis has developed, or until the health of the patient is permanently shattered.
2. Failure to completely detach the colon from the kidney, which may drag the kidney away from its anchorage or give rise to annoying pain.
3. Failure to immobilize the kidney until it can become permanently adherent by employing absorbable sutures or by attaching them insecurely to structures that yield to the constriction when it is tied.
4. Fixing the kidney too low down, where it will be irritated by pressure of the corsets or clothing constricting the waist.

In the report made to the American Medical Association, there was a record of 159 nephropexies by the method here described (on 126 patients); in 33 of these both kidneys were fixed at the same time, without a death and without a single failure to secure permanent fixation. The ultimate results were cure of the symptoms and conditions depending upon the prolapse in all of the cases in which it has been possible to trace the patient, from two to twelve months after operation.

ENDOMETRITIS: ITS PATHOLOGY AND TREATMENT.

Charles A. Robertson, M.D., Professor of Gynaecology and Abdominal Surgery, Nashville, Tenn., has an article on this subject in the January number of the *American Journal of Surgery and Gynaecology*. Dr. Robertson, after treating somewhat fully the anatomy, and histology of the subject, takes the position that the disease is one of infection, whose pathology, symptomatology and treatment depend upon the character and virulence of the poison. He maintains a germ-free condition of the uterus exists in health and thus excludes the possibility of auto-infection. Therefore, infectious material, of whatever character, is introduced from without.

Etiology.—Under this heading the following points are mentioned:

1. Instrumentation of the uterine cavity with criminal intent, or for diagnostic purposes.
2. Filthy hands of the physician or mid-wife in obstetric practice.
3. The use of the daily vaginal douche, with unclean nozzle, the resort to tamponade and rubber devices for the prevention of conception; unclean coitus.

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rvix, chronic dilatation of the cervix, and
uterus favor infection of the endometrium,
ends in pathogenic bacteria.

as acute specific diseases, exanthematous
placements, vulvo-vaginal disease, impaired

gy of endometritis, the writer says we may
cal, diphtheritic, tubercular, and occasionally
metritis.

ometritis.—The symptoms depend upon the
upon the character of the infection.

ed by a chill, followed by rise in temperature
ain in suprapubic or sacral regions is usually
nd painful micturition with rectal tenesmus.
ncreased, is puriform in character, and may
ild cases the discharge may be clear and vis-
ince, and is designated as a leucorrhoea.
tion the lochia is either much lessened or

ection the discharge becomes purulent very

we usually find the os uteri quite patulous,
the body of the uterus somewhat enlarged

c Form.—The symptoms of the acute form,
chronic form, especially the pain, tenderness,
vesical disturbance.

is disturbed. The patient may suffer with
and, in the fungoid variety, hemorrhage is

ge being copious, thin, purulent, often offen-
blood, is a prominent symptom in this form.
o the lower abdomen and back, and is asso-
' sensation.

rine headache" he has observed, but is con-
stancy or value.

es impaired, the patient being prone to neur-
s of mental depression.

if conception should occur, abortion is quite

gnosis, a microscopical examination of the
atters up.

Treatment of Acute Form.—Acute cases, if mild and of non-puerperal origin, need nothing more than rest in bed, saline purgation and vaginal douching of water at a temperature of 105 degrees to 120 degrees twice daily.

If the case is one of puerperal infection, or occurring after abortion with perhaps retained products of conception, undergoing decomposition, it becomes necessary to remove the offending material under strict aseptic precautions.

The curette, which, in the hands of the inexperienced or careless surgeon, is capable of doing irreparable injury, is, in proper hands, an instrument of great value, and capable of saving many lives. After curetting the uterine cavity it is important to irrigate with an antiseptic, for example a 2 per cent. solution of creolin.

Where the pelvic peritoneum is rapidly involved, the serous secretion which is copiously thrown out becomes a suitable culture medium for the growth and reproduction of streptococci, which are rapidly absorbed, hence vaginal section and drainage is often of great value.

In very extreme infections, hysterectomy may be the only hope and should be performed.

Treatment of the Chronic Form.—Dr. Robertson says in the simple, uncomplicated forms where leucorrhoea is the most persistent and annoying symptom, the local application of mildly escharotic and antiseptic remedies may bring about a cure.

In cases of marked hypertrophy and hyperplasia, with involvement of the myometrium, this local treatment may in time bring benefit, but at best it is slow, uncertain and promises but little. When the patient prefers this local treatment to anything of a surgical nature the general health must be at the same time well looked after by giving tonics, etc.

In the fungous variety, with irregular and oftentimes copious hemorrhage, there is no way but the radical operation of curettage. Temporary relief may be obtained by giving cotarine hydrochlorate in doses of 2 1-2 to 4 grains four times daily.

In all forms of chronic endometritis the operation of curettage should be performed; however, curettage alone does not suffice to bring about a cure, for the utricular glands penetrate the entire thickness of the membrane and their distal extremities are imbedded in the muscularis.

Curettage does not remove all the mucous membrane, and even if it did, there still remains the cup-shaped distal extremities of the utricular glands in which the pathogenic micro-organisms are entrenched in sufficient numbers to perpetuate the diseased process. Therefore, after curettage we should apply antiseptic remedies, such as iodine, carbolic acid, chloride of zinc, and, in gonorrhœal cases, nitrate of silver, and this should be repeated twice a week for a month or six weeks.

Complicating conditions, such as uterine neoplasms, cervical and urethral lacerations, displacements, and adnexal disease must be relieved by appropriate surgical treatment.

Failure to recognize and properly deal with complicatory conditions, either general or local, presage failure in any and all forms of treatment of uterine infections.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty, McGill University, Montreal.

CHRONIC INTESTINAL DYSPEPSIA OF CHILDREN.

J. Bunton Blaikie, in the *Edinburgh Medical Journal*, September 1904, deals with the above topic.

In his paper, the author has embodied a study of fifty cases of what he terms chronic intestinal dyspepsia, the "mucous disease" of Eustace Smith; or, as it is termed more frequently in America, chronic intestinal indigestion.

The children, between the ages of three and twelve years, were attendants at the outdoor clinic of the Great Ormond St. Hospital, London.

Recognition of this condition as a distinct clinical entity is important for three reasons: First, it is an exceedingly common condition; second, correct diagnosis results in a reassuring prognosis, as the condition is usually diagnosed as tuberculosis or tabes mesenterica; third, correct diagnosis means correct treatment, which is directly contrary to that of tuberculosis, as forced feeding, cod liver oil and hypophosphites tend to aggravate the condition.

The condition is common in the children of the poor, but is frequently met in the children of the wealthier classes. There is a certain amount of hereditary predisposition to this condition and it is common to both sexes. It is most commonly met with between the ages of three and five years.

The duration of the disease he was unable to ascertain, but in many of the cases it had lasted for years. Few of the children showed obvious signs of former rickets and, in these cases, pre-existing disease seemed to play but a small role in the etiology.

The author agrees with Smith and others that the nervous element is an important factor in the causation of the condition. A careful study of the symptoms reveals that languor combined with excessive excitability or nervousness, are constant.

All suffered from nocturnal restlessness while "night terrors" and anuresis were common. Forty-seven of the cases complained of headache and forty-eight of cough. The cough is usually of a "hacking" character, though the "bark" of the common "stomach cough" is frequent. Pain

in the epigastrium was present in forty-seven of the cases. This pain had no relation to the indigestion of food.

In every case more or less wasting was noted. The appetite was deranged in all. In the females the appetite was poor, while in the case of males it was frequently ravenous.

Irregularity of the bowels was frequent, constipation marking some of the cases, diarrhoea others; while in many, the condition alternated irregularly. Contrary to description given by Holt and Rotch the motions generally appeared normal.

Occasionally, attacks of fever, associated with symptoms of acute gastric disturbance, occur in the course of this disease. In these cases the symptoms often suggested appendicitis and may lead to a mistaken diagnosis. Jaundice occurred in six of the cases. Flatulence was very rare. With regard to mucous in the evacuations the author states that in thirty of these cases it was never observed, in five it was rare, while in thirteen it was frequently present. Intestinal parasites were frequently found. Three cases had tape worm, two *ascaris lumbricoides*, and six thread worms. Attacks of palor were common in all cases, and in most complaints were made of cold extremities.

Physical examination of the cases showed that pale, sallow faces were common. The skin was usually harsh but not so marked as seen in advanced tuberculosis. The condition of the tongue varied, but two common types were met with. In the first, the tongue at the back is coated with a whitish yellow fur, whilst the rest of the organ is fairly clean, but covered with a layer of shiny saliva. In the second type, the dorsum of the tongue has a whitish, sodden appearance, as if steeped in an alkali, the fungiform papillae stand prominently out of this white background as raised, bright pink prominences.

Examination of the urine showed nothing typical, though albumen was found present in six of the cases. The prognosis is generally good, though in the author's cases the results of treatment were difficult to record as many of the cases could not be followed up.

The author dwells on the value of change of air and of surroundings in the treatment of these cases. He considers this the most powerful remedy. Associated with this, to be curative, there must be a careful regulation of the diet which should be maintained for years. The diet should consist of milk, rusk, thin toast, stale brown bread, eggs, lightly cooked fish, and meat and green vegetables may be allowed in small quantities.

No sugar, sweets, jam, potatoes, new bread, sago, tapioca, arrow-root, Indian corn, flour, turnips or carrots should be given.

Cold baths, warm clothing, open air life and freedom from excitement must obtain.

The drugs most useful are alkalies, digestives and bitter tonics. He recommends the following as a useful mixture: \mathcal{R} Potas. bicarb.; Potas. Citrat. aa gr. \mathfrak{z} ; Tr. nuc. vom. m. \mathfrak{ss} ; Tr. Myrtill. m. \mathfrak{xxx} ; Infus. Cass. Co. ad \mathfrak{ss} - \mathfrak{ss} . \mathfrak{ss} . P. M. The in small doses at night is valuable especially when constipation is marked.

THE VALUE OF THE ADDITION OF CITRATE OF SODA TO COW'S MILK IN INFANT FEEDING.

F. J. Poynton, *London Lancet*, August 1st, 1904, remarks that the use of citrate of soda was first suggested by Wright in the *Lancet*, July 22nd, 1903. He pointed out that there are two forms of milk curdling. Rennet curdling in which the resulting clot is firm. This takes place when the stomach is empty. Acid curdling, in which the resulting clot is loose. If the lime salts of the cows milk are precipitated, the clotting by rennet will be delayed in time and will be less firm in its consistence and thus become more digestible. As lime salts are in excess in cows milk, as compared with human milk, this precipitation can be brought about without impairing its food value. Citrate of soda when added to cow's milk results in precipitation of the lime salts, and, being harmless, Wright recommended its addition with this purpose in view.

Poynton has successfully carried out these suggestions in his clinic in Great Ormond St. Hospital; and finds that, as a rule, the proportion of one grain of citrate of soda to the ounce of milk brings about the desired result.

A prescription is ordered of a solution of citrate of soda in water to which is added a small quantity of spts. chloroform to prevent fungus growth. The dose of the mixture is so arranged that one teaspoonful, added to the child's food mixture, gives the desired amount of citrate of soda for the milk contained in it.

He has never met any ill effect from its use. He has treated fifty cases of severe indigestion in artificially fed infants in this manner. He usually uses cow's milk diluted with one or two parts of water, according to the infant's digestive capacity.

When the infant's indigestion is due to the proteids in its food, this method of treatment succeeds. If the indigestion is due to fat, then the method fails and other treatment is indicated.

THE CAUSES OF INFANTILE MORTALITY.

In the *Glasgow Medical Journal*, October, 1904, there is a report of the discussion of the causes of infantile mortality which took place at the Glasgow Med. Chir. Soc., important papers on the subject being read by

Dr. A. K. Chalmers, Professor Glaister, and Dr. Ness. These papers present an interesting mass of statistics difficult to abstract, but well worthy study by those interested in this important subject.

Dr. Chalmers' paper deals with the infantile mortality of Glasgow. He states that the decrease in the birth rate of that city during the last thirty years has been about 20 per cent., while the infantile mortality has declined only about 12 to 14 per cent.

Professor Glaister points out that those causes which have operated toward the amelioration of this condition of the lives of average citizens, of those conditions in which progress has been made in general sanitation, have failed to reach the infants under one year of age. In these countries a progressive diminution of general death rate has obtained, but no such diminution is discernible in the death roll of children.

High death rates in children under one year prevail in all parts of the civilized world. Figures prove that the rate of infantile mortality is not diminishing.

In large urban centres the mortality rate is higher than in rural. About one-half of all children who die before the completion of their first year, do not survive the first three months of their existence.

He divides the cause of infantile mortality into two classes—the unavoidable and preventable.

Under the heading unavoidable may be included such as premature birth, injury at birth, congenital defects and deformities, and congenital diseases.

Much waste of infant life results from marriages between parents of unhealthy stock.

Preventable causes of infantile mortality are insanitary domestic surroundings, vicious and objectionable modes of life of parents, effects of parental poverty, occupation of mothers during the early months of child-nursing, wilful or compulsory abstinence of mothers from nursing their off-spring, and physical unfitness of mothers for that duty owing to different prime causes.

With regard to preventive measures these must depend upon the joint efforts of the state, municipalities and the medical profession.

Demonstration of approved methods of rearing children, and especially of the artificial methods of feeding children in cases where lack of maternal milk supply, or necessity to work, prevents natural feeding, must in great measure be depended upon. Such experiments have been attended with beneficial results in many parts of the world. The result of such an experiment made by the council of Salford reduced the infantile mortality rate in one year from 246 per 1000 to 178 per 1000.

He advocates the control of milk supply and the establishment of milk depots in congested districts.

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Public creches, where the infants of poor mothers compelled to work during the day may be cared for and fed have proved of great value. They become centres for the dissemination of knowledge of infant hygiene and feeding and have a high educational value.

X-RAY THERAPY AND SKIAGRAPHY.

Under the charge of JOHN McMASTER, B.A., M.D., C.M., Toronto.

THE INHIBITORY ACTION OF X-RAYS UPON MALIGNANT GROWTHS.

In the December issue of the *St. Louis Medical Review*, Dr. Geo. Johnston of Pittsburg, Pa., an X-Ray operator of wide experience, possessed of a broad knowledge of electrical appliances and a keen discerning judgement in the best methods for their application as therapeutics, recounts his experience and draws conclusions from it regarding the effects of X-Rays upon malignant growths. His paper is to support the following proposition, that the radiations from an excited Crooks tube capable (if applied in accordance with well defined technique) of inhibiting the rapidity of the growth in malignant tissue, and in a certain proportion of cases. This inhibition becomes permanent, and is followed by disappearance of the growth, which may be replaced by a normal scar tissue constituting a more or less permanent clinical cure. In some cases inhibitory action is absent. Indeed if the proper technique is not employed, which implies the use of a tube with the vacuum properly adjusted to suit the case, the time of treatment and the distance of the tube from the diseased tissue, as well as the quantity of radiance produced, inhibition may not be produced, but in its place a seeming increase of activity of the pathologic process. The methods to be employed in this work are of far more importance than were at first thought to be. To acquire this judgement necessitates careful and prolonged use of the apparatus used and its powers of producing X-radiance. The notions that have raged over the *modus operandi* of radiotherapy are useless, and we are not so much concerned with how this agent accomplishes its work as we are with what it accomplishes. Quinine cured malaria as quickly and positively before man first saw the plasmodium does now. The fact that two grains of quinine will not cure a case of malaria and that sixty grains may produce permanent deafness, do not make quinine useless or that it is dangerous. Many of the failures recorded during the past year, have been based upon an experience of under or over dosage. The judgment of the value of radiotherapy must be based upon the results achieved, by men of the highest skill and of the largest experience in dealing with these classes of

cases, and not upon the scattered success or frequent failures which bespeak inexperience and want of judgment in technique.

This inhibition while not constant, yet occurs in direct proportion to the skill and experience of the operator, and the results, on the whole, are more favorable each year, as time adds to the operator that judgment which contact with large numbers of cases alone can bring. Its value to the surgeon in operable cases is evident. In many personal experiences, a patient physically unfit for operation, has been built up by tonic treatment, while the disease was held in check by radiation till such time as a successful operation could be performed; then radiation was employed to promote granulation and prevent recurrence. The final results have been pleasing to both operator and patient. In frankly inoperable cases, the method of treatment has been used many times, with the happiest results, to prolong life and relieve pain. In some of these supposed hopeless cases a clinical cure has followed and persisted over periods of years.

This inhibitory action is to a degree in direct proportion to the dosage administered, which degree consists in the following factors, length of exposure, frequency of exposure, distance from the tube, penetration of the ray (vacuum in the tube) strength of excitement and quality of current.

A general characteristic of malignant tissue is in its enormous rapidity of cell proliferation. This is checked and in some instances stopped by radiation. The newly formed tissue low in vitality and physiological resistance to injury and endowed with poor reparative power, may, even and often does undergo tissue death, and is absorbed or thrown off *en masse*, and is replaced by connective tissue. If this process be complete throughout, a clinical cure results; if not, the growth is but temporarily inhibited and will, later, take on renewed activity. This effect is local. There is no antitoxin generated which circulates through the body to have effects at distant points upon foci, which have not been exposed to the radiation. No matter how thoroughly the original growth may have been destroyed, metastatic deposits will go on as usual, unless found and destroyed. The difficulty of an early recognition of metastatic foci is responsible for a very large part of the failures in other than primary cases.

The radiation from an excited Crook's tube is capable, when properly applied, of inhibiting malignant growth.

This inhibition is in direct proportion to the skill and experience of the operator and is not a constant result.

In certain cases this inhibition is so complete and permanent as to constitute a clinical cure.

In inoperable and apparently hopeless cases, the radiation may be employed with gratifying results to prolong life and relieve pain.

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is of great value following operation to prevent recurrence. Its use for therapeutic use must be confined to specially skilled physicians and surgeons, and its prostitution at the hands of nurses, clerks, engineers, etc., should be opposed by all ethical men.

X-RAYS IN SKIN AND GLAND AFFECTIONS.

Dr. Russel H. Boggs, Secretary of the American Roentgen Ray Society, whose experience in the use of X-rays has been extensive, states that in the treatment of skin and glandular disease that X-rays has a stimulating effect when applied in small doses and a destructive action in large doses. The dosage of no other therapeutic agent, therefore, is so important. The rays should be used as carefully as strychnine or any other poisonous drug. In small doses the rays accelerate the process of nutrition and in this way, aid in the healing of unhealthy skin.

In many cases time is saved by using high frequency currents instead of light in connection with the X-rays. The irritation and trophic changes produced by the X-ray, are deeper than those produced by stimulants. He has treated twenty-seven cases of lupus vulgaris and lupus erythematosus. Twenty of the cases of lupus were cured, twenty improved and one of the lupus erythematosus cured and the other improved. Four of the cases of lupus vulgaris had a relapse or a recurrence in which the X-rays were again effective. Each of the cases in which a relapse occurred, stopped treatment as soon as the visible signs of the disease disappeared. Most of his cases were extensive and of long duration and could not be treated with Finsen light. He has been able to improve his technique that one half of the treatments now are sufficient to cure.

In the case of primary epithelioma he has treated thirteen cases, that had no previous interference. Nine of these are cured, two improved and two under treatment. A permanent cure cannot be expected in the latter, as the disease is very extensive.

In the cases of carcinoma of the neck involving the glands, which included as epithelioma of the lower lip, were treated. In each of these cases the epithelioma had been removed by the knife and there was a recurrence and the case referred for X-ray treatment. All these were hopeless from a surgical standpoint. At present, one case is apparently cured. In the case of these cases would probably have recurred if X-ray had been used after the removal of the epithelioma by the knife and a sufficient dose of radiation been given to destroy the remaining foci.

Excellent results have been obtained in tubercular glands by the use of X-rays.

The same is true in tubercular sinuses. Seven cases of the disease were treated with five cures, one is still under treatment and almost all the others discontinued after a short time with but little improvement.

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Obstinate cases of acne and chronic eczema respond to this treatment when all other forms of treatment have proved ineffective.

Out of twenty-four cases of carcinoma of the breast, all were favorably influenced by the rays, excepting one, sixteen of these have been operated upon and a recurrence taken place when they came under treatment. Six cases were considered hopeless and only inhibitory was expected by the physicians referring them. Two of the other four which had never been operated upon were in such a condition that the surgeon had refused to operate. Out of the twenty-four cases treated therefore, there were only six in which much could be expected. At the present time, eight have died, of two trace has been lost, and the other fourteen are living. Seven are symptomatically cured, three under treatment and are rapidly improving, and the other four are usually becoming weaker. Several of these have been well for over five years, but this is too short a time to say that there will be no recurrence.

His conclusions are, 1. Technique and judgment are largely accountable for both successful and unsuccessful results. 2. In the treatment of lupus, epithelioma, carcinoma, acne, eczema and tuberculous glands X-ray ranks an excellent remedy. 3. In most cases of carcinoma a combination of X-ray and surgery offers the best chance of recovery.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

THE TREATMENT OF EARACHE.

In the *Brooklyn Medical Journal*, December, 1904, Dr. Laffer McClelland discusses this old and ever important subject as follows:

The objects of this paper have been to call attention to the importance of symptoms referable to diseases of the ear in childhood and especially that most common affection, earache, for it is a notorious fact that this very troublesome affection receives scant attention even from men of the medical profession who honor themselves with the opinion of duty well. Under aetiology, it may be stated as a general principle that any disproportion from the equal aerial pressure within and without the tympanum is contributory towards this affection. Therefore, what can be more noteworthy than the common coryza, so difficult of treatment in children is a contributory cause. Frequently the nose and post nasal space is filled with a yeasty supply of gurgling mucous, which is being churned backward and forward during respiration. This is often aspirated into the Eustachian tube and tympanum. Then, again, we must not forget the impinging of adenoid tissue and other enlargements about Rosenmüller's fossa which gradually choke off the sufficiency of air entrance into the tube of the ear.

piston-like action of an enlarged faucial tonsil will suck out, or aspirate, at each piston-like motion during deglutition. Consequently the muscular structures concerned in the usual control of the air supply of the tympanum will lose tonicity. Again, at times the pharyngeal vault is lined with cobweb-like adhesions which often involve the openings of the Eustachian tubes. These hinder the action of the salpingopharyngeus muscle when, as they often are, found binding down the lips of the tube in all directions like little strands of dried catgut. Between the meshes made by such is ever present a catarrhal exudate viscid and persistent. Inspiration of water into the tubes during bathing is another cause common in the summer time. Nasal douches and the forcible sniffing of water into the nose are likewise fraught with similar danger. A violent blowing of the nose may be a factor. I believe that the inspiration of various stomachic and intestinal gases may also tend to produce this trouble.

Under pathology, let me be cursory, for here we have just that which would occur to an inflamed mucous membrane anywhere plus the results emptying an aerated cavity of its air which occurs by deflation and absorption. We have a retraction of the membrane, due to its lack of aerial support. Soon it becomes congested. The mucous membrane swells and becomes oedematous and flabby, so that the walls of the affected area may become agglutinated. Then the transudation of serum follows. In acute catarrh of the middle ear the mucous membrane is alone involved, but the fluid which accumulates is usually in the form of sero-mucus. I have not limited my observations too exclusively to the tympanum, for like the analogous, though not identical, affection which is known as acute catarrhal aural salpingitis might be considered distinctly, we will consider the combined affections which for our practical purposes are so closely correlated that their origin and tendencies are similar; for it is too common a fact that we may have an involvement from the orifice of the Eustachian tube all through the tube to its terminus and involving the tympanum too. The accumulation of fluid within the tympanum may be such as to distend the membrane so that its removal is urgently called for, if indeed the overdistention has not already been sufficient to produce a rupture of the drumhead.

In children the temperature usually is 102 degrees or 103 degrees and may run much higher. It may be ushered in by chills, vomiting or convulsions. Pain is excruciating and apt to be constant until the pressure is relieved. The piercing cries of the child with earache are to me peculiarly trying. Usually the infant places his hand to the affected ear. The membrane is diffusely hyperaemic and later may be seen to bulge so that the drumhead is forced low in the external auditory canal. After discharge takes place the canal is rapidly filled with a sero-mucus discharge

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which can be seen to pulsate in rhythm with the arteries of the tympanum. The flow is often so great that the canal refills rapidly after cleansing. In adults, the pain is severe, but apparently less than in childhood. In addition to the exaggerated symptoms there is a feeling of stuffiness in the ear, muffled voice sounds, snapping and bubbling sounds due to air entering the fluid, pain, deafness, sometimes giddiness from labyrinthine pressure. Mental hebetude is often marked prior to the distention.

Physical examination further shows besides the congestion, at an early stage, retraction of the membrana tympani, absence or displacement of the pearl or light spot, undue prominence of the hammer while in advanced cases may be seen the fluid line and bulging of the tympanum.

Prognosis is usually good under appropriate treatment. This depends, however, largely on the character of the invasion, whether streptococcal, staphylococcal or pneumococcal.

Under treatment in the early stage there are two immediate considerations, viz., relieve the pain and abort further involvement. This can frequently be accomplished by thorough cleansing of the nose and nasal space, preferably with cotton on probe, then the application of a 1:10000 adrenal chloride solution on cotton when the cleanness and patency of the nasopharyngeal entrance will enhance the chance of re-establishing the intra-tubal and tympanic pressure by nature, or by the aid of Politzer's bag. At times, when the membrane is retracted greatly, the Siegmund otoscope will withdraw the membrane's excessive impingement upon the ossicles and thus tend to replace the normal position. Liberal flushing of the canal with water of 110 degrees to 120 degrees delivered in a constant stream from the ordinary fountain syringe, using the smallest nozzle which should be placed on the floor of the canal, but not pushed into it, will prove of much service in relieving the prevailing condition in many cases. I believe that this simple procedure is not practiced at sufficient regular and short intervals by many, who fail of the object in consequence. Half hourly intervals between the two quart irrigations is often indicated. Application of leeches to the tragus will often dissipate the agony of a suffering child so promptly that sleep will follow forthwith. A dressing to the ear can be found most comfortable and my preference is a large wad of warm absorbent cotton packed loosely about it. A hot foot bath and a cathartic are often beneficial. Occasionally a hypodermic of morphia may be necessary.

Failing to abort the affection, sterilize the canal and incise the membrana tympani while the patient is under the influence of either nitrous oxide gas, ether, chloroform or a local anaesthetic, e.g. R. Alcohol, Carbolic acid and cocaine (saturated solution), equal parts.

After operating, irrigate the canal with sterile warm saline solution or Thiersch's solution.

electrification or local application of the currents, but it must be remembered that local applications have a general effect.

Local applications may be applied as follows :

1. By means of the effluve taken from the resonator applied to the side of the head. The multiple electrode is held as near the patient as possible without producing sparking.

2. By means of condenser electrodes, which are attached to each end of the solenoid, and introduced into the external auditory canal.

3. By metal electrodes, placing one against another, that is applying the currents "by derivation." This method is apt to be painful unless carefully done.

It has been shown by D'Arsonval and others that high frequency currents have a profound effect on nutrition generally. Under their influence there is a great increase of the secretions, and in the output of heat. If the benefits derived depend on these properties, then the proper way of applying treatment would be by general methods. There may, however, be other explanations. There is a great alteration in the circulation produced by the currents, not only in the general arterial tension, which is first lowered, then raised, and remains above the normal for a considerable time, but there is a marked local effect, the capillaries being greatly dilated.

There is another possible explanation, namely, there may be a fine mechanical vibration set up by the passage of the current.

In connection with the supposed germicidal effect of this form of electricity, it has been suggested that the cultures are rendered sterile by the mechanical vibration set up in the media. On account of these properties—alteration of local blood supply and mechanical vibration—local treatment may be expected to be more useful than general.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., Belleville. Fellow of the British Laryngological Rhinological and Otological Society.

THE ETIOLOGY, TREATMENT AND PROGNOSIS OF INNOCENT LARYNGEAL GROWTHS.

Dundas Grant, *Journal Laryngology*, in introducing this subject, at the recent annual meeting of the British Medical Association, confined his remarks to the non-malignant growths found in the interior of the larynx. The etiology of these growths is very often veiled in obscurity and, in many cases, are so closely related to inflammatory products that

they cannot be distinguished from them. Grant prefers to describe most of the small polypoid growths on the vocal cords as vocal cord hypertrophies and not fibromata. He says in general the causes of new growths in the larynx are those of irritation. Among those are wrong use of voice and irritating vapours, a dusty atmosphere (blackboard chalk in case of teachers), excess of tobacco smoke (especially by inhalation), nasal obstruction leading to mouth breathing, or purulent nasal discharges inhaled into the larynx. Syphilis may produce chronic inflammatory changes, predisposing to new growth development; and tubercle bacilli, as well as accompanying micrococci, are also capable of exciting the growth of papillomata.

Treatment is not necessarily always operative. The avoidance of exciting and predisposing causes, complete silence or limitation of voice to a whisper for several months, is sometimes sufficient in cases of very small nodules due to over-use or misuse of the voice. Laughing must be absolutely prohibited or prevented. Avoidance of smoking and smoky or dusty atmosphere, moderation or abstinence in regard to alcohol, and other causes of gastro-hepatic disturbance, are also valuable prophylactic and therapeutic factors. The correction of errors of voice production is of vital importance. Vocal exercises, after Holbrook Curtis' method, are very valuable in suitable cases. Various astringent applications may also be of value. Grant has had some excellent results in cases of small growths by using the galvano-cantery point, and also finds it of value to cause the disappearance of any small pieces remaining after the use of forceps.

THE TREATMENT OF DIPHTHERIA WITH SPECIAL REFERENCE TO THE DOSAGE OF ANTITOXINE.

While there is practical unanimity among medical men as to the value of antitoxine, there seems to be a hesitancy among some to use large doses, thinking probably the small doses are sufficient. Voelker, *Clinical Journal*, October 12, 1904, summarises his conclusions as to the use of antitoxine as follows: (1) It should be used in every case of diphtheria, whether mild or severe; (2) in cases of faucial diphtheria, use 3,000 units; (3) in nasal diphtheria use 6,000 to 9,000 units at once; in laryngeal diphtheria use 6,000 units, and repeat the dose within twenty-four hours if the symptoms of obstruction are not diminishing; (4) when symptoms call for intubation or tracheotomy, use 6,000 units at once, and repeat the

dose within twenty-four hours if there is not a distinct improvement; (5) in cases of faucial diphtheria, if the membrane does not show signs of separating after twenty-four hours, repeat the injection; (6) the injection should be made with antiseptic precautions into the subcutaneous tissue of the abdominal wall.

DISEASES OF THE MAXILLARY ANTRUM, THEIR DIAGNOSIS AND TREATMENT.

Emil Mayer, *Laryngoscope*, December 1904, in a very practical paper on this subject, in which he introduces a special form of wash bottle and curved canulæ for irrigating the antrum through the natural opening, arrives at the following conclusions:—

1. The diagnosis is readily made when all classical symptoms are present.
2. The absence of pus in the nose does not exclude antral disease.
3. Pain, long lasting, directly over the antrum, should be an added factor in the diagnosis.
4. Transillumination test is corroborative.
5. The washing out by means of the natural opening is difficult of accomplishment, because of the lack of proper drainage, and is applicable to the acute conditions only.
6. Irrigation by means of a properly made wash-bottle, whose force can be readily controlled, is of very great help in the treatment.

ACUTE SINUSITIS IN CHILDREN.

Massei, *Archivii Italiani di Laringologia*, October, 1904. The author points out that contrary to the general opinion, acute maxillary sinusitis is not so rare in children of five years. The article is limited to the discussion of sinusitis of the antrum and of the frontal sinus. The most common cause is coryza. The easy communication between the antrum and the nose permits of the extension of inflammation and the entrance of organisms as the pneumococcus, streptococcus, staphylococcus, colon bacillus, influenza bacillus, etc. The disease may follow diphtheria, scarlet fever, measles, etc. Exceptionally a bad tooth acts as an exciting cause. The pathological anatomy consists of a serous infiltration or of round cells without notable destruction of the epithelial layer. The purely serous exudate is an exception and when it does occur may form a cyst. Resolution is the rule. If in the course of an acute coryza, an infectious disease or influenza, a child complains of pain at some point in the face, an acute sinusitis must be thought of. Examination of the nose shows pus in variable quantity and fœtid. The third symptom is fever. Relapses are common.

PROVINCE OF QUEBEC NEWS

Conducted by MALCOLM MACKAY, B.A., M.D., Windsor Mills.

At the Montreal Medico-Chirurgical Society a very interesting evening was devoted to the discussion of actinomycosis. Dr. Bell began by giving a very complete paper upon nine cases which had been under his charge, in which the diagnosis had been confirmed by bacteriological methods, mentioning three other cases in which he was satisfied that the condition was present, but which were not confirmed. Dr. Quam followed with a report chiefly upon the pathological conditions, and Dr. Keenan spoke of the surgical pathology and methods adopted in confirming the diagnosis. Dr. W. F. Hamilton and Dr. Chipman took up the medical and gynaecological aspect of the cases. Drs. Nichols and Archibald added much to the success of the evening by their able remarks during the discussion which followed.

Drs. England and Richardson showed a living case of fracture of the skull and a pathological specimen of sarcoma of the omentum. Dr. W. F. Hamilton read a paper on lead-poisoning with a summary of thirty cases. Dr. Hamilton, who has devoted some time to this subject during the past year, pointed out among other things the peculiar blood changes found in the condition.

The regular meeting of the district of St. Francis Medical Association was held on January 11th in Sherbrooke with Dr. Austin in the chair.

The first business taken up was in reference to a letter from the President of the Medical Protective Association, which stated that local provincial executives were being appointed throughout Canada, in order to facilitate the work, and that Drs. Buller, Thomas and Park had been appointed for the Province of Quebec. It was thought that this measure was necessary in order to conduct the movement in a business-like manner. The fact that the St. Francis Medical Association originated the scheme was mentioned, and it was requested that all new members should follow the example of the older men and join the association. The secretary then read a communication from the secretary of the Canadian Medical Association regarding the proposed change in the British Medical Act of 1858, which prevents colonial graduates from holding positions in the British Army, Navy and Civil Service. Lieut.-General Laurie is about to bring the question before the Imperial Parliament for the second time, and propose the acceptance of colonial degrees. The society passed a resolution hoping that the proposed amendment might be carried and thanking Lieut.-General Laurie for his interest in the matter.

Dr. Farwell read a very practical paper on mastoid disease. He took up the question from the standpoint of the general practitioner and spoke of the methods of dealing with the condition from the simple application of ice in early mild cases, to the complete removal of the bone in severe infections.

Dr. Camirand reported a case of a boy, aged seven, with a testicle situated in the inguinal canal. At operation the testicle was found to be normal with its tunica and membrane and cord intact.

Dr. Blackford reported a case of pneumonia with pyæmia of the elbow and shoulder joints as well as pus in the bursal sack of the hip joint. The patient was but a year old and recovered, after incision of the foci, with good use of the joints.

Dr. Mackay reported a case of Little's disease in a child aet six years. It had been a seven months pregnancy and the child weighed less than three pounds at birth. Development was slow but the mental functions were fairly good. A very marked spastic paraplegia was present, the arms not being involved. After three months of massage and graduated exercises some definite improvement was noticed.

Dr. Brown related a remarkable case in which within six hours of beginning treatment for what appeared to be a simple catarrhal jaundice the patient became maniacal. The jaundice increased to such an extent that bile pigment could be rubbed off any part of the body, and the patient died within 48 hours without any return of consciousness. No post-mortem could be obtained.

Dr. Bachand reported a case of albuminuric retinitis where the patient was blind of one eye without knowing it, and where the kidney lesion was first diagnosed by the retinal condition, improvement had followed treatment for Bright's disease.

The election of officers for the Montreal League for the Prevention of tuberculosis resulted as follows: President, Sir George Drummond; vice-presidents, Sir William Hingston, Mr. G. B. Burland, Mr. J. Reid Wilson, Hon. Senator Beique, Mr. E. S. Clouston; chairman executive committee, Dr. Lachapelle; chairman publication committee, Dr. Adami; chairman finance committee, Mr. G. C. Holden; chairman investigation committee, Mr. W. I. Stethem; convenor ladies' committee, Lady Hingston.

Dr. J. A. Riches, who has been for two years secretary of the league, presented his resignation, which the members very reluctantly received. As they still hope to retain Dr. Riches' supervision of the work, no successor was appointed, and it is likely that one or more assistants will be appointed for Dr. Riches if he retains office.

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that he be relieved of duty as chairman of the hospital, of which he is president. He suggests the appointment of a business man to the chairmanship.

It was authorized to print an annual report

of progress and much is being done to cure the disease in the city.

The Montreal General Hospital has announced the donation of \$10,000 from Mr. Robert Reford for the purpose of erecting a new ward, or out-door department. The governors have accepted the gift as they see fit.

Recommended by the Board of Management of the West-End Hospital, with a view to raising sufficient funds to meet the cost of \$10,000. During the past five years the number of patients has greatly increased, and while in 1898 the admission reached 600. In the out-door department the number has increased from 69 to 7,560. This expansion of the medical department has increased the cost of supplies and wages, and the higher cost of supplies has increased the annual expenditure, which with the increase in wages has been covered. The institution, however, has been able to cover nearly half of which is made up of out-door patients, but is not only a continual source of annoyance to the public, but greatly embarrasses and hampers the work of the hospital. It has been decided to make an earnest effort to secure the necessary funds.

The response by the public to this appeal has been very generous, and the subscriptions are being reported in

the following list:—The students of Bishop's Medical College was

also in Montreal is nearing completion. It will accommodate sixty beds. It is built on a site of 100 acres and is a training school for nurses in connection with the hospital.

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EDITORIAL

PROFESSOR OSLER'S VISIT TO TORONTO.

Professor Osler is always a welcome guest among medical men wherever the English language is spoken. Indeed, his reputation has spread far beyond the medical profession and is widely and favorably known to the general public. All this is as it ought to be and is the result of merit built upon the foundation stones of honesty of purpose and hard work. Professor Osler is a fine fulfilment of Ruskin's definition of genius as consisting in a capacity for work.

Dean and Mrs. Reeve gave an At Home, Wednesday evening, 27th, in the medical buildings, in honor of Professor Osler. The function was very largely attended by the medical profession.

On the afternoon of 28th, Professor Osler opened the building in Queen's Park to be devoted to uses of the Ontario Library Association. On that occasion he gave some excellent advice. He urged that professional jealousies should cease and that all should unite in raising the standard of the medical profession socially and educationally. He strongly discountenanced listening to the gossip of patients which often created much ill-feeling. He said that "Never believe what you hear against your brother practitioner, not even if you know it to be true." He referred to the ill will that was formerly too common among teachers of medicine. "In heaven's name what can we expect from young men taught under such conditions?" With regard to the value of study, the observation of cases and the association with each other he said, "Years do not necessarily bring experience. They may bring sterility, for there are many who do not gain in intelligence or ability with the passing years, and all of us know of men who, the older they get, the worse doctors they become." He urged that an effort be made to secure the manuscripts and records of the older physicians, as they contained much of value regarding the early history of the profession in this province. He spoke of the nobility of the medical profession and the high ideals of the ancient Greek physicians. As Professor Goldwin Smith once remarked, "The angel of mercy has accompanied the medical profession throughout the ages, and there were no persecutions to mar its history."

in surgery. Keep the staphylococci and the streptococci out of your wounds and they will heal rapidly and painlessly, thereby averting suffering and saving life. But this, again, opens up a new field. Disease is attacked by the surgeon in every portion of the body. In doing so he not only cures, but prevents. Sepsis has now lost its terrors. The maternity hospital is no longer closed because of puerperal septicæmia, nor is the surgical ward cursed by hospital gangrene.

But all this effort after the scientific side of our profession has too often overshadowed the æsthetic side. There is an art in medicine as well as a science. The doctor should be a gentleman in word and act, and many an able physician has been handicapped by a faulty manner. The late Milner Fothergill once said that, "when visiting even the most humble cottage never to forget the old lady sitting in the corner."

There is another feature in the practice of medicine that must not be forgotten. There are at the present moment too many practising physicians, and the proportion to the population is steadily increasing. In the United States there are about 100,000 regular doctors. To this number about 5,000 are added each year. This far exceeds the reduction due to deaths in the profession. It requires about 1,000 people to yield a fair practice to each physician. This ratio is steadily decreasing, and with this decrease in the number of persons to each doctor the average income must fall.

But in all the cities, large hospitals are being erected. There is a marked tendency in many of these to give advice and medicine free. This, of course, pauperizes the people in this respect. In the large cities there are usually one or more medical colleges. To make these efficient there must be found clinical material. To get this clinical material is often a serious problem and, consequently, the hospitals in connection with these colleges offer free or very cheap beds to patients, and free or nominally free treatment. This induces patients to come from a distance and therefore deprives the local practitioners of their fees. While it is not our desire to say one word against these colleges nor the hospitals in connection with them, it is only reasonable to expect that they will be so managed as not to rob the very men they are graduating from year to year.

The medical profession has paid too little attention to mental influences, and more must be given to this side of the physician's work in future. A man is not all mind, neither is he all body. Fright has been known to produce exophthalmic goitre and joy to cause sudden death. Fear will cause diaphoresis and anxiety diuresis. The secretions and excretions may be lessened, increased or very markedly modified by the emotions. "A physician's exclusive duty should be to study men as men, to master the marvelous intricacies and dependencies of spirit, soul and

body, and to be sufficiently skilled to know when and how to call on the one to help the other, and with such men the profession would be complete." To these words of Sir James Paget let us add those of Sir Benjamin Brodie: "It is the business of every practitioner of medicine to study not only the influence of the mind upon the body, but also that of the body upon the mind." The neglect of these things have been largely responsible for the growth of Christian science and other fads.

One more thought. Every advance in medical science tends to do away with the doctor's occupation. Preventive medicine is reducing the death rate, lengthening life, and lessening the total amount of sickness. Mr. Wade once said in his presidential address before the British Medical Association that "The time might come when the principal duties of the profession would be to attend to accidents and injuries, to wait upon the aged, and to look after the conditions incidental to parturition."

TOXAEMIA AND INFECTIONS AS CAUSES OF INSANITY.

The blood is the source of nutrition to the brain and the channel of exit for its waste material. The bearings of poisons in the blood, as causes of insanity, is of comparatively recent date. These toxins may be developed in the gastrointestinal tract, or by bacteria in the system, or result from the retention of waste products because of faulty elimination.

In not a few cases of brain disorders, careful enquiry will reveal the fact that there has existed considerable disturbance in the digestive organs, accompanied by fermentation and putrefactive processes. As a result of this there may be considerable change in the urine, indicated by the presence of urates, phosphates, oxalates, xanthin, indican, and abnormal specific gravity.

Each neurone is an entity and intimately related to the vascular and lymph channels which surround it. These neurones are very sensitive to their surroundings. The quality of the blood and lymph acts upon the nerve elements, and their health or disease determined thereby. In this way the nutrition of the neurones is affected, and, when perverted functional nervous disorders follow, or worse, some organic change in the nerve elements sets in. If there be any hereditary tendency the danger is increased. Toxines may be introduced from without, exogenetic, or developed within the body, endogenetic. The nerve elements affected and the nature of the poison account for the phenomena, as to their clinical features of excitability or depression.

It is well known that many neuroses arise from enteroptosis, hepatic derangements, chronic constipation, etc. In all these cases the utmost care should be devoted to the digestive organs. In these cases lavage, laxatives, intestinal antiseptics, and the regulation of diet must receive

due attention. Nearly all cases of acute insanity should be treated on the eliminative plan. Just here comes in the great value of the open air treatment. In no other way can so much be done for an acute maniac or one suffering with delirium tremens, as by keeping them in the open air.

It has been observed that alcohol tends to produce insanity with criminal tendencies, lead causes mental derangement of the paretic type, and the toxins of febrile diseases some form of acute mania. It must also be borne in mind that a person who easily becomes delirious from toxins in the blood, has usually some inherent instability of the nervous system, and is liable to break down again on slight provocation.

The lesson from all this is that the insane should be subjected to careful study as to the condition of all their organs and functions. For the treatment of the early period of insanity, as urged by many competent authorities, there should be special hospital pavilions with abundance of ground and facilities for the open air treatment. A hammock swung between two trees will cure more cases of insomnia than our best narcotics. While purgatives, suitable nourishment, and exercise in the open air will bring back reason to more maniacs than the most elaborate system of asylum rooms.

It is our departure from our walk with nature that breeds mental derangement and a return to nature's methods is the best way to recover the lost balance of thought.

BLOOD PRESSURE.

There are few subjects that should interest the physician and surgeon more than that of the blood pressure, and the causes for its variation. The most important function of the vascular system is the maintenance of that degree of blood pressure required in the several parts of the body. Alteration in the proper blood pressure gives rise to some of the most marked disorders to which the body is heir. In speaking of blood pressure the arteries are usually in mind, as it is not often that there is much change in the degree of pressure or tension in the veins. The maintenance of circulation is largely one of the adjustment of tension so as to distribute the blood from the vessels where it is stored to the parts where it is required.

As an example of this adjustment of the amount of blood in different portions of the body take the effects of ordinary exercise. The first effect of both muscular and mental effort is to raise arterial pressure; but after a time the pressure falls again to normal. While this state of increased pressure continues, there is a larger amount of blood in the arteries than usual. This extra amount of blood is obtained from the blood stored in

the abdominal veins. There is here a well marked reciprocation between the systemic arterial and the abdominal venous blood supply. Exercise removes the blood from the digestive organs, while the taking of food and the active performance of digestion withdraws blood from the general arterial circulation. This accounts for the depressed feelings which active exercise causes after eating, and the coldness that follows the taking of food after exercise. Over-eaters are usually lethargic, while the mental workers are frequently dyspeptic. The arterial system is a blood-reservoir, the area of which is constantly increasing with distance from the heart. This reservoir must be kept full, and as exercise dilates the peripheral vessels the heart must work with more energy to fill these vessels. It must also be borne in mind that the blood is contained within a system of tubes a considerable portion of whose walls are composed of muscular tissue.

There is a group of low pressure cases, such as are met with in valvular diseases, and in diseases of the muscular substance of the heart. High tension cases are caused by some agent acting upon the arterioles, giving rise to a constricted condition of them, and forcing the heart to do extra work to supply blood to the tissues. This agency is usually a toxæmia. There is still a third group of cases, the terminal low-tension cases; or the final low-tension stage of those cases that present, in their early history, a condition of high-blood pressure.

Turning to the low-pressure cases, it should be noted that whatever weakens the pumping power of the heart may cause them. Disease in the muscular walls of the heart, such as myocarditis, or degeneration in the muscle tissue, any form of valvular disorder, when compensation fails, and dilatation from cardiac strain, are competent causes for primary low-tension conditions. This low-tension state must be regarded as pathologic as soon as the blood pressure is low enough to deprive the tissues of their proper blood supply.

The treatment of these cases is of much importance. When the low-tension is due to a weakness in the heart, without any discoverable arterial or valvular disease, the indications are to strengthen the heart by tonics, exercise and proper food.

In cases of low-tension, due to valvular disease, much care is required and the management of these cases naturally falls into three periods—the early period, the period of compensation, and the period of failing compensation. In the first period of valvular disease, the main features in the treatment are prolonged rest and the gradual return to an active life. By these means the valves are enabled to make the nearest approach to recovery and the heart to acquire the requisite hypertrophy to maintain compensation. The restrictions on the patient's movements must be kept in force until objective signs and subjective symptoms have disappeared

When the restoration is slow, digitalis and other cardiac tonics may be employed.

When compensation has been established, the patient must live in a very guarded manner. Every form of excess must be scrupulously avoided, and physical and mental exertion regulated with great care. This quiet life is required for two reasons, the avoidance of annoying symptoms and the production of undue hypertrophy. The occasional administration of the iodides have been recommended as a means of restraining the tendency to over hypertrophy.

In the later period of these low-pressure cases, when compensation has broken down and there may be more or less oedema, the main features of the treatment are rest, care of the digestive functions, cardiac tonics and eliminatives. These patients are also benefitted by being kept in the fresh air as much as possible. Late low-tension cases, caused by degeneration in the hypertrophied heart, or from an overly fat-laden heart, are treated on the general principles arising out of the causative conditions.

THE PUBLIC AND THE DOCTOR.

In the first place the family doctor has often a good deal to contend with in the case of the "irregular practitioners." Some of these are quite harmless, while others are very dangerous—not to the doctor, but to the patient. Christian Science and Osteopathy rank among those most frequently met with. To these fads the doctor must yield no countenance. The fundamental fact in Christian Science is that many diseases get well if left alone, while in Osteopathy there is nothing other than the application of massage to cases suitable and unsuitable alike. It behooves the doctor, however, to make himself familiar with these fads in order that he may intelligently deal with them when they are brought under his notice.

The doctor should disavow any special designation. He should neither be a "homoeopath," nor an "electropath," nor an "allopath." He should stand up firmly for the idea that the whole practice of medicine, surgery and obstetrics is scientific, and that it is founded upon investigation, study, reasoning, and experiment. He should disclaim any such tenets as that "like cures like," that "infinitesimal doses are sufficient," or that there are "schools" in medicine. All regular physicians should discard the name "allopath," except as having a historical meaning. When homoeopathy came into existence, its founders called those who rejected their wild claims, "allopaths," or those of the "other" pathology. The word "allopathy" has as little place or meaning in scientific medicine as would the word "thaumaturgy."

in practice the worse doctors we become without this habit of observation

One last but all important point is this. The doctor should not engage in lodge practice. He should keep his services up in the estimation of the public, and this he cannot do through the lodge.

EYE-STRAIN IN MODERN LIFE.

Dr. George M. Gould, of Philadelphia, has written a good deal upon the effects of the errors of refraction on some noted persons. These articles have constituted his well-known "Biographic Clinics."

It may be that many are not able to follow Dr. Gould as far as he would wish to lead them, but this does not prove that he is not leading them in the right direction. His studies on the sufferings of Browning, Spencer, Carlyle, Darwin, Huxley, Parkman, Taine, Nietzsche, Beethoven, Wagner, De Quincey, Symonds, etc., are well calculated to make the medical profession think. And we suppose this is all Dr. Gould is concerned about; for he believes if the profession will only think about the matter, much of what he is contending for will be accepted.

We have seen some very adverse criticisms of Dr. Gould's views, and in journals of high standing. But books and articles are no wiser than the men who write them, and it is just possible that some of these unfavorable opinions came from the pens of those who had not given the subject much personal study. If so, then their opinions are of but little weight. But we have all known of opinions that were given in the most positive manner and backed up by many arguments, and that after all turned out to be quite erroneous.

Taking the cases of those studied by Dr. Gould, no other solution has yet been offered for their ill health than that suggested by him. It does seem strange that, with so many learned men in the medical profession, no theories have been brought to light to explain the case of Darwin or Parkman, or any of the others. These persons were attended by eminent physicians who failed to discover any organic disease; and, in most cases, they lived to an advanced age, recovering from their distress in many cases, as they advanced beyond mid-life, when the condition of eye-strain might pass off.

But most medical men are familiar with cases closely resembling the history of those studied by Dr. Gould, and whose symptoms were entirely, or very much, relieved by glasses. Here, then, we have concrete proof; and it does not seem very difficult to reason back from such instances to a case like that of Carlyle or Browning. We certainly think that Dr. Gould is making headway, the adverse critics notwithstanding to the contrary.

siderable portion of which consists of this deadly spirit, wood alcohol. We have said before, and wish to emphasize it again, that there should be a public officer whose duty it would be to analyze such mixtures and report their composition and warn the people regarding the dangers of their use. The question of vested rights or personal liberty must not stand in the way for a single moment when the people's health and lives are at stake. Justitia must be blind to all else but the welfare of the public.

THE GIVING DAYS.

We hope these blessed days of giving have come to stay; not only in Toronto, but throughout the entire province. Mr. Cawthra Mulock gave \$100,000 to aid the clinical work of the medical faculty of the University of Toronto. We learn that Mr. George Gooderham is going to give a handsome donation to the Toronto General Hospital for the same purpose. We hope there are others to follow.

But we hope that this sort of thing may become general. Why should some wealthy persons, living in Kingston, not give a few hundred thousand dollars to the Kingston Hospital and medical college? Then, again, there is money going to waste in London; and some people have so much of it that they do not know how to use it. Let them turn in and take an interest in the medical college and hospital in London. Get proud of, and keep proud of, their own city. Why should the wealthy people, in and around Kingston and London, allow the wealthy people of Toronto and Montreal to out-step them? There is only one reason—they have not yet got the right sort of pride in their own cities.

It has often been said that the wealthy people of Toronto do not immortalize themselves by their donations. Well, we hope that this statement may prove less true in the future than in the past. The signs of the times are that a more liberal spirit is abroad, and that the long lost magic words, "Open sesame," have been found at last.

DECLINE IN THE DEATH RATE FROM CONSUMPTION.

In a recent issue of the *Boston Medical and Surgical Journal*, Dr. Miller discusses the above subject. His observations are very encouraging and hopeful. In the United States the death rate was, in 1890, 245 per 100,000, while in 1900 it was only 187. In England in the same period, it fell from 238 to 190; and in Prussia from 280 to 210 to the same unit of population.

The causes for this decrease in the death rate from consumption are to be found in the knowledge of the germ, the better sanitary conditions of

same footing as British graduates. This would be a genuine step towards true "Imperialism."

The following is the text of the proposed bill of General Laurie as introduced last session :

Be it enacted by the King's most Excellent Majesty, by and with the consent and advice of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

1. From and after the commencement of this Act the provisions of the Medical Act, 1858, shall be extended by adding to Schedule A of said Act the under-mentioned paragraph to be known as paragraph twelve.

"12. Doctor, or Bachelor, or Licentiate of Medicine, or Master in Surgery of any University or Medical School in the Empire at which the curriculum of studies and the examinations required to be passed by the undergraduates shall be accepted and recognized by the General Medical Council as equal in all respects to the requirements from students and candidates for degrees in the Institutions shown in paragraphs one to eleven of Schedule A."

2. This Act may be cited as the Medical Act, 1903.

THE THIRTY-EIGHTH ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

The thirty-eighth annual meeting of the Canadian Medical Association will be held in Halifax, N. S., from the 22nd to the 26th of August, both days inclusive, 1905, under the presidency of Dr. John Stewart of that city. Recently there was held in Halifax a special meeting of the Medical Society of Nova Scotia, when there were present several members from the surrounding country near Halifax. It was decided that the Medical Society of Nova Scotia should act as hosts and entertainers of the Canadian Medical Association. Dr. G. Carleton Jones has resigned from the position as local secretary and the president, on the advice of his executive, has appointed Dr. J. R. Corston as local secretary, Dr. Jones having been appointed chairman of the General Committee of Arrangements. The address in surgery will be delivered by Mr. Francis Caird, of the Royal Infirmary, Edinburgh, and the address in Gynecology will be delivered by Dr. Howard A. Kelly, of Johns Hopkins, Baltimore. The title of his address will be "Cystitis in Women." Dr. J. W. Stirling, of Montreal, will deliver an address in Ophthalmology. In addition to this there will be addresses in Medicine and Pathology and Dr. A. J. McCosh, of New York, will also be asked to present a paper.

Dr. T. H. Orton has returned to Guelph after four months' absence, and resumed his duties.

Dr. Dougald McBane has entered into partnership with Dr. W. F. VanBuskirk, of St. Thomas.

Drs. A. N. Worthington, M.P., and W. W. Lynch, Sherbrooke, have entered into a partnership.

Dr. John N. Johnston, of Lakefield, was married recently in Peterborough to Miss Mae McPherson.

Dr. Klotz, who some years ago practiced in Middleville, has now established himself there permanently.

Drs. R. M. Simpson and Halpenny have formed a partnership and have commenced practice in Winnipeg.

The marriage of Dr. S. C. Farrel, of Rat Portage, and Miss Naomi Borden, took place at Port Williams, N. S.

Dr. and Mrs. Edwin Seaborn, after their wedding trip to the Southern States, have located on Dundas Street, London.

Dr. Brefney O'Reilly was home from a trip to Hong Kong and spent the holiday season in Toronto with his parents.

Dr. Bertha Dymond, after spending two months in Britain, has resumed her practice at 66 Brunswick Avenue, Toronto.

Dr. D. G. Cameron, of Wallacestown, has been appointed house surgeon at the Hospital for Sick Children, College Street.

Dr. and Mrs. Bruce Smith, formerly of Brockville, have taken up residence for the winter at 412 Markham Street, Toronto.

Dr. Leslie R. N. Hess (Tor. '03), of Hamilton, has begun practice in the office recently occupied by Dr. Thomas Douglas in that city.

Dr. Frizzell, who practiced his profession in Kemble for a period of between three and four years, has opened an office in Owen Sound.

The marriage of Dr. R. N. Walsh, M.P. for Huntingdon, Que., to Miss A. W. Cunningham, took place Monday evening, January 9th.

Dr. A. P. Douglas, medical health officer of Winnipeg, attended the American Public Health Convention, held in Havana, Cuba, a short time ago.

Dr. John W. Cook, late of St. Michael's Hospital, Toronto, has located in Fort William, and has gone into partnership with Dr. A. D. Stewart.

Dr. Edward Richardson, of Sturgeon Falls, and Miss Mamie Behan, of Pembroke, were married two weeks ago in the Bishop's Palace, Pembroke.

The 50th anniversary of the marriage of Dr. Anson Buck and Keturah Adelaide Howell was celebrated on Tuesday, December 27th, at their home in Palermo.

The marriage took place in Tillsonburg on Monday, January 23rd, of Miss Florence Livingstone, of that town, to Dr. W. T. Williams, of St. Thomas.

Dr. O. S. Niemeier, of Annette Street, E., Toronto Junction, who is the latest arrival in the medical profession, lived formerly in Tavistock for eighteen years.

Dr. Fred S. Eaton, a recent graduate of Toronto University, has received an appointment as house surgeon for a term of a year and a half at a New York hospital.

Reference to the statistics of the Secretary of the Provincial Board of Health, show a decrease of 40 per cent. in the deaths from consumption in the last three years in Ontario.

The many friends of Dr. W. H. Johnston, of Fergus, will learn with regret that he has been very ill for some time. He was taken ill when making a visit to a patient. It is feared he may have to go to a warmer climate.

Dr. Edward Fahey, a graduate of Queen's, and a former resident of Kingston, was married quietly, January 5th, in Rochester, N.Y., to Miss Kathleen G. Joyce. Dr. and Mrs. Fahey left immediately afterwards for Duluth.

An interesting ceremony was performed at the residence of Mrs. Elizabeth Shore, 102 Charlotte Street, Winnipeg, January 11th, when her only daughter, E. Grace, was united in marriage to Dr. I. Herbert Davidson, of Manitou.

Eight members of the house staff of 1892-3, at Toronto General Hospital, had a pleasant reunion three weeks ago at the hospital and a dinner at the Toronto Club in the evening, at which Dr. Charles O'Reilly was the guest of honor. Among those present were: Drs. H. B. Anderson, J. A. Bruce, Fred Fenton, and H. C. Parsons, of Toronto; Dr. J. N. E. Brown, Dawson City; Dr. Middleboro, Owen Sound; Dr. A. S. Tilley, Bowmanville; Dr. H. J. Way, Chicago.

Dr. O'Reilly congratulated his hosts one and all on their great success during the past twelve years, and on their devotion to the honorable profession, four having taken English degrees and two the F.R.C.S. by examination after having spent a year in the Toronto General Hospital.

Since 1876 some 220 house surgeons have been on duty in the Toronto General Hospital for one year, and longer, and it is intended to inaugurate soon an "association of ex-house surgeons." The mortality has indeed been remarkably small, only eight of the 220 having died in 28 years.

The new pavilion for the Toronto Western Hospital, which furnishes accommodation for forty patients, is making rapid progress towards completion. It is intended in the spring to erect another building with accommodation for fifteen or twenty patients to be devoted to contagious cases, or such as require isolation.

Dr. Alfred Thompson, the new member for the Yukon, is a Nova Scotian by birth. He was born at Nine Mile River, Hants, in 1866. He was graduated an M.D., C.M., from Dalhousie in 1898, and joined the rush to the Yukon in April of the following year. He immediately began the practice of his profession in Dawson.

Dr. George A. Charlton, of McGill University, who has lately returned from Vienna, where he has been doing research work for the past year, has been appointed by the Northwest Government as pathologist and bacteriologist for the Northwest Territories. Dr. Charlton is at present visiting his aunt, Mrs. B. E. Charlton, 280 Bay Street south, Hamilton.

In the Muskoka Cottage Sanitarium, it was reported, the number of patients under treatment during the year was 218, rather more than for the previous year and much greater than any other year. The training school for nurses that had been established during the year had proven success, and helped materially to strengthen the institution.

The annual banquet of the medical students of London, Ont., was very successful affair. There were over two hundred persons present. In reply to the toast of the Medical Faculty, Dr. Moorehouse gave an excellent review of the progress of medical education in the province during the past 35 years, or since the establishment of the Medical Council.

Two Montreal boys, medical graduates of McGill University, have just been given important appointments by the Liverpool School of Tropical Medicine. They are Dr. McConnell, son of Dr. J. B. McConnell, Bishop Street, and Dr. Wolferstan Thomas. The two young doctors will go on expeditions to study tropical diseases. Dr. McConnell going to the West Coast of Africa and Dr. Thomas to the Amazon, in South Africa.

The most successful year in seven is the story revealed in the report presented at the seventh annual meeting of the trustees of the National Sanitarium Association, which was held at the National Club on Saturday afternoon last. Sir William R. Meredith, the vice-president, was in the chair, and others present were Hon. George A. Cox, Mr. W. J. Gage, Mr. J. J. Crabbe, Mr. Hugh Blain, Mr. Edward Gurney, Dr. N. A. Power.

Dr. W. T. Williams, who has been practicing medicine in St. Thomas for some time past, sailed about the end of January for Nassau, Bahama, having received the appointment of government physician for the island of Inagua, Bahamas, with headquarters at Mathewtown. Dr. Williams' friends will be pleased to hear of his appointment and will wish him success in his new home.

OBITUARY.**REGINALD PERCY VIVIAN, M. D.**

Dr. Vivian died at his home in Barrie, December 8th, in his 30th year of age, from an attack of diphtheria. He was a graduate of the University of Toronto of the class of 1889.

DAVIDSON MACDONALD, M. D.

Dr. Macdonald died in Toronto, January 3rd, from an attack of acute dilatation of the heart following la grippe. He graduated in 1873 and went to Japan, as a medical missionary, where he was well known both as physician and missionary.

A. S. KIRKLAND, M. D.

The late Dr. Kirkland, of Collingwood, was born in Argyleshire, Scotland, in 1844. He was educated at the Toronto School of Medicine, and graduated in 1867. He practised in Nottawa, Mount Forest, Duntroon, and Collingwood. He was a man of much force of character.

CHARLTON SHAW, M. D.

Dr. Shaw, of Tupperville, died at his home on December 10th, last, having returned the day before his death from St. Louis. Though not feeling well on his return, he made no special complaint, but the day following was seized with a severe attack of heart trouble and died suddenly.

ROBERT SOMERS, M. D.

Dr. Robert Somers died of pneumonia at Le Mars, Ia., where he had been practising medicine for several years. He had been ill only a few days.

Somers was a graduate of the University of Toronto, and of Toronto Medical School, and was about 32 years of age. Deceased was well known in Toronto as a bright energetic young fellow, for whom a brilliant future was anticipated, and the most sincere sympathy and heartfelt regret is being tendered to the family.

OBITUARY.

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N. F. SNIDER, M. D.

Dr. N. F. Snider and wife, Odessa, were driving to a dinner party on January 5th, when the horse ran away and disaster ensued. Snider was thrown against the ridge pole of a bridge, striking his head with terrific force. He was carried home and died 30 hours later. He was aged 63.

PETER REID McMONAGLE, M. D.

Peter Reid McMonagle, M.D., died at Prescott on Tuesday, December. The deceased was the second child and eldest son of H. and Isabel McMonagle, of Hampton, Kings County, New Brunswick and was born June 3, 1833. Commencing life as a school teacher, and receiving a classical education in what in his day was known as an academy, he subsequently entered the Burlington, Vt., medical college, from which he received his medical diploma. Subsequently he also received a diploma from a medical college in Philadelphia and one from a Brunswick college of medicine in New Brunswick in 1854. In 1861, during the Civil War, he located at Rossie, St. Lawrence County, where he practised his profession until 1865, when he located at Ogdensburg, N.Y., where he practised until 1872, since which time he has resided at Prescott, Ont. In 1852 he married at Maugerville, New Brunswick, Canada, Sarah S. Miles, by whom he left five children.

GEORGE A. CAMPBELL, M. D.

The death is announced of Dr. George Andrew Campbell, late of the British navy, which took place on January 16th at the age of 64. He was born in Kingston, Ont., and was a son of the late Dr. Duncan Campbell, who at one time practised in this city. He was a brother of Dr. F. A. Campbell, Bay Street, Toronto. Deceased leaves a widow and five children. Deputy Inspector-General of Hospitals and Fleets, George Andrew Campbell, M.D., R.N. (retired), of 2 St. Leonard's Road, London, England, was educated at Upper Canada College, Toronto, and at Harvard and at Kingston, Ont., where he took his M.D. degree in 1859. Entering the navy in 1860, he became a staff-surgeon in 1872, and in that capacity served in the Heccla, at the bombardment of Alexandria, on July 1, 1882, during the Egyptian campaign, which followed, and through the naval and military operations near Suakim, in the Eastern Soudan, in 1884. For his war services he received the Egyptian medal, with Alexandria and Suakim clasps, and the Khedive's bronze star. He was promoted to the rank of fleet-surgeon in 1883, and retired in 1891 as deputy inspector-general.

BOOK REVIEWS.

CARINOMA AND SARCOMA OF THE LARYNX.

Malignant Disease of the Larynx (Carcinoma and Sarcoma) by Philip B. W. De Santi, F.R.C.S., Lecturer on Disease of the Throat, Nose and Ear, Westminster Hospital Medical School, etc. Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, London.

De Santi is particularly qualified to write on this topic, and acknowledges the help he has received from Mr. Butlin and Sir Felix Semon in the preparation of it. His object is to place before the profession the correct English views on the operative treatment of laryngeal cancer. In a book of one hundred pages he has written all that is of value in the diagnosis and treatment of this distressing malady.

EXAMINATION OF THROAT, NOSE AND EAR.

Guide to the Examination of the Throat, Nose and Ear for Senior Students and Junior Practitioners, by William Lamb, M.D., C.M., Edin., M.R.C.P., Lond., Honorary Surgeon, Birmingham Ear and Throat Hospital. Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, London.

This small book of 150 pages contains an amazing amount of valuable information for students and general practitioners. The author has succeeded in making the most elementary part of the book pleasant reading. The difficulties frequently met with by beginners are anticipated and simple methods of avoiding and correcting them are given. The pages on the chapter on "Hints on Local Treatment" is full of very useful tips. The chapters devoted to the examination of the nasal sinuses are particularly good. We can recommend this book as quite the best guide we know.

TREATMENT OF INOPERABLE CANCER.

Some Methods of Hypodermic Medication in the Treatment of Inoperable Cancer. By John A. Shaw Mac'ansie, M.D., Lond., Bailliere, Tindall & Cox, 8, Henrietta Street Covent Garden, London. Price, paper, 1s.

This is a brochure giving the experience of the author in the treatment of inoperable cases of cancer with the hypodermic administration of iodo-turpentine and soap solution. A 20 per cent. solution of iodo-turpentine in olive oil is employed, of which the initial dose is 5 minims, increasing by 5 minims on alternate days, up to 60 minims. The injections are into any muscular part of the body. Some very interesting cases are reported. The second method of treatment is by the hypodermic injection of soap solution, made after the manner of Dr. J. H. Webb, Melbourne. Common yellow bar soap will do, of which a one per

cent. solution is made. One drachm is injected every four days into sound tissue as near the cancer as possible. It is painful and half a drachm of a 3 per cent. solution of eucaine should be first inserted. Along with this treatment, he advises the use internally of inspissated fresh ox gall. The little booklet is worthy of very careful study, as it gives the record of several encouraging cases.

DR. NORMAN WALKER'S DERMATOLOGY.

An Introduction to Dermatology, by Norman Walker, M.D., F.R.C.P. Edin., Assistant Physician for Diseases of the Skin to the Royal Infirmary, Edinburgh, Editor of the *Scottish Medical and Surgical Journal*, with 49 full-page plates and 50 illustrations in the text. Third Edition, revised and enlarged. Bristol: John Wright & Co. London: Simpkin, Marshall, & Co., 1904. Price, 9s. 6d.

To state that this book is got up in a handsome style is to give it less praise than it merits. Everything about it from the book makers point of view, is ideal. With regard to the contents, Dr. Norman Walker needs no introduction to the medical profession. The first edition appeared in 1899, and now the third is issued in 1904. The arrangement of the subjects are simple, but scientific. The pathology is tersely given, yet clear and satisfactory. For a medium sized book of 280 pages, there is a very full statement of treatment. There are many excellent prescriptions scattered throughout the book. We can recommend this work on dermatology with the utmost confidence.

EDGAR'S OBSTETRICS.

The Practice of Obstetrics. By J. Clifton Edgar, M.D., Professor of Obstetrics and Clinical Midwifery, Medical Department of Cornell University, New York City; Attending Obstetrician to the New York Maternity Hospital, etc. Second Edition, Revised, Enlarged and Improved, with 1264 Illustrations, including 5 colored plates and 38 figures in colors. Philadelphia: P. Blakiston's Son and Co.; Toronto: Messrs. Chandler & Massey. Price, cloth, \$6.00; sheep, \$7.00.

Some time ago we reviewed the first edition of this important work and spoke in very high terms of its merits. The second edition is now before us with some additions. This is a standard work and reflects the highest praise upon author and publishers. The work is throughout very original in every way. The author is independent in his method of teaching, though fully acquainted with the best views and conservative to all that is good. The illustrations are largely original and prepared for this work. We recommend this book very highly as a truly great and erudite work, worthy of a place in any library along with the best in medical literature.

DISEASES OF THE EYE.

compend of the Diseases of the Eye and Refraction, including Treatment and Surgery. By George M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D. Third edition, revised and corrected. One hundred and nine illustrations, several of which are in colors. Philadelphia: P. Blakiston's, Son & Co. 1904, Price \$1.00.

Drs. Gould and Pyle are well known writers on diseases of the eye. The present little book contains a great deal of very useful information on the diseases of the eye. Indeed, it contains everything that the general practitioner requires. The information is given in a neat and practical form. It is a very useful book.

HAND-BOOK OF THE ANATOMY AND DISEASES OF THE EYE AND EAR.

For Students and Practitioners, By D. B. St. John Roosa, M.D., LL.D. Professor of Diseases of the Eye and Ear in the New York Post-graduate Medical School; formerly President of the New York Academy of Medicine, Etc., and A. Edward Davis, A.M., M.D., Professor of Diseases of the Eye in the New York Post-graduate Medical School; Fellow of the New York Academy of Medicine. 300 pages, square, 12 mo. Price, extra cloth, \$1.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

This is a useful little hand book which describes the anatomy, physiology and diseases of the eye and ear in a clear and comprehensive manner and is suitable for use by general practitioners and students. The section on therapeutics of the eye is up to date and contains a brief description of the newest drugs and their mode of employment. A second edition of this book would be improved by the insertion of a few cuts and illustrations of which the present edition is entirely devoid.

ESSENTIALS OF ANATOMY.

Including the Anatomy of the Viscera. By Charles B. Nancrede, M. D., Professor of Surgery and Clinical Surgery in the University of Michigan, Ann Arbor. Seventh edition, thoroughly revised. 12mo volume of 419 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Cloth, \$1.00 net. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This work, now in its seventh edition, has met with a most cordial reception. In this revision the entire book has been carefully gone over and the section on the Nervous System completely rewritten. The illustrations throughout the text are excellent, showing the anatomy of various parts with unusual clearness. Students, and indeed young practitioners, will find the work of great service.

A TEXT-BOOK OF CLINICAL DIAGNOSIS.

By Laboratory Methods. For the use of Students, Practitioners and Laboratory Workers. By L. Napoleon Boston, A.M., M.D., Associate in Medicine and Director of the Clinical Laboratories of the Medico-Chirurgical College, Philadelphia; formerly Bacteriologist of the Philadelphia Hospital, and at the Ayer Clinical Laboratory of the Pennsylvania Hospital. Octavo volume of 547 pages, with 320 illustrations, many of them in colors. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Cloth \$4.00 net; sheep or half morocco, \$5.00 net; J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

Dr. Boston here presents a practical manual of those clinical laboratory methods which furnish a guide to correct diagnosis, giving only such methods, however, that can be carried out by the busy practitioner in his office as well as by the student in the laboratory. He has given special attention to outlining in progressive steps the various procedures in clinical technic, such steps being illustrated whenever possible. All the more recent methods for the examination and staining of blood are described and illustrated by original drawings, and the subject of Serum-Diagnosis is very carefully considered. The newer methods for the estimation of Sugar, Bence-Jones' Albumin, Uric Acid, and Purin have received thoughtful consideration. The subjects of Animal Parasites, Diseases of the Skin, Transudates and Exudates, and Secretions of the Eye and Ear have received an unusual amount of space. Attention has also been paid to Inoscopy and Cyto-diagnosis. Indeed the book contains much useful material throughout, and being the latest work on Clinical Diagnosis, includes the most recent advances along that line.

NEW JERSEY BOARD OF HEALTH.

The Twenty-Seventh Annual Report of the Board of Health of the State of New Jersey, and Report of the Bureau of Vital Statistics, 1903. Somerville, N. J.: The Unionist Gazette Association, State Printers.

This report, like all those from the New Jersey State Board of Health contains much useful information for persons having to do with matters of Public Health. Some of the articles are specially valuable, such as those on Smallpox, on State Hygiene, on Streams Pollution, etc.

EXAMINATION OF THE URINE.

By G. A. de Santos Saxe, M.D., Pathologist to the Columbus Hospital, New York City. 12mo volume of 391 pages, fully illustrated, including 8 colored plates. Philadelphia, New York, London: W. B. Saunders & Co., 1904. Flexible leather, \$1.50 net. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

Dr. Saxe has presented a work on examination of the urine unusually complete, absolutely up to date, concise, yet explicit in all its parts; and it will be found to meet fully the requirements of the student and practi-

tioner without burdening him with unnecessary analytic procedures. Special attention has been paid to the interpretation of findings as applied to clinical diagnosis, and the student is told what each chemical element and each microscopic structure means when found in the urine. The character of the urine in various diseases is also described in detail. Descriptions of technic have been made very explicit, and the author has inserted some new methods of working developed in his own experience. Cryoscopy and other means of functional diagnosis have been given their proper places. The text is fully illustrated, including eight colored plates of the various urinary crystals. The work will be useful because it is practical.

HAIG'S DIET AND FOOD.

Diet and Food Considered in Relation to Strength and Power of Endurance, Training and Athletics. By Alexander Haig, M.A., M.D., Oxon., F.R.C.P., Physician to the Metropolitan Hospital, and the Royal Hospital for Children and Women. Fifth Edition, with seven illustrations. Philadelphia: P. Blackiston's Son & Co.; Toronto, Messrs. Chandler & Massey. Price, \$1.00, net.

Some time ago we reviewed the previous edition. On that occasion we mentioned some of the leading features of this little book. It is full of very valuable information, and will well repay a careful perusal of its pages. The information it contains is important and well stated. The book is written in Dr. Haig's well known forceful style. We think that most who read this book will be somewhat surprised at the manner in which the author demolishes many of the old theories about food and their nourishing qualities.

NAGEL'S EPITOME OF NERVOUS AND MENTAL DISEASES.

A Manual for Students and Physicians. By Joseph Darwin Nagel, M.D., Consulting Physician to the French Hospital, New York. In one 12mo volume of 276 pages, with 46 illustrations. Cloth, \$1.00, net. Lea Brothers and Co., Publishers, Philadelphia and New York, 1904.

In this age of rapid progress and evolution of new theories and sciences the student of medicine, who in four years is supposed to master the intricate and varied details of his chosen profession, and the busy practitioner, who must still spend a good part of his time in research and study to keep abreast with the rapid strides of advance, both feel the daily need of a text-book which will give them the essence of the subject which they are pursuing. It is with this idea that the author has undertaken to gather the various facts and data contained in the numerous text-books and pamphlets on the diseases of the mind and nervous system.

and to weave them into a compact fabric, easily studied by those who are in search of precise information.

There is not a single author or lecturer of high standing, whose teachings have not been incorporated in a condensed form into the pages of this volume.

Illustrations are used throughout the volume wherever the understanding can be better helped by the combination of text and pictures, and the price of the volume (\$1.00), based upon the certainty of a very wide usage, is low enough for every student's purse.

MAGEE & JOHNSON'S EPITOME OF SURGERY.

A Manual for Students and Practitioners. By M.D'Arcy Magee, A.M., M.D., Demonstrator of Surgery and Lecturer on Minor Surgery; and Wallace Johnson, Ph. D., M.D., Demonstrator of Pathology and Bacteriology in Georgetown University Medical School, Washington, D.C. In one 12mo volume of 295 pages, with 129 engravings. Cloth, \$1.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1904.

The authors and editor have made an earnest endeavor to furnish an authoritative, clear, compact presentation of the essentials of modern Surgery. While this little volume is by no means intended to take the place of a text-book, it will be found convenient for study many times when a large book is inaccessible, while for students' use in quizzing themselves or each other, in preparation for college or state board examinations, it will be of the utmost service. As with the other volumes of this excellent and very popular series, the questions are not interspersed with the text, but follow each chapter, thus permitting consecutive reading without interruption.

HYDE AND MONTGOMERY ON THE SKIN.

A Practical Treatise on Diseases of the Skin, for the use of Students and Practitioners. By James Nevins Hyde, M.D., Professor of Dermatology and Venereal Diseases, and Frank H. Montgomery, Associate Professor of Dermatology and Venereal Diseases in Rush Medical College, Chicago. Seventh and revised edition. In one octavo volume of 938 pages, with 107 engravings and 85 plates in colors and monochrome. Cloth, \$4.50, net; leather, \$5.50, net. Lea Brothers & Co., Philadelphia and New York, 1904.

The volume is no doubt already familiar to you, since it has long enjoyed the greatest popularity among the profession, but we invite your special attention to this, the seventh edition, because it represents such marked improvements as to render it practically a new work.

A glance at the preface will indicate to some extent how thoroughgoing has been the revision to which the volume has been subjected and what soundness of judgment has been displayed in selecting the new topics admitted to its pages. Due prominence is given to every fact of

portance that the fruitful fields of recent investigation have yielded the mere theorizations receive critical discussions, the authoritative-ness of which is attested by the prominence of the writers.

The sections devoted to radio-therapy and to photo-therapy are unusually full and contain all needful details for the successful application of these forms of treatment, the indications for their employment being elaborated under the various diseases for which their use is to be recommended.

The most advanced discoveries in the etiology of such diseases as malaria, variola, pyroplasmosis, blastomycosis, etc., are mentioned and subjected to critical scrutiny, and a new chapter on the general pathology of the skin has been added to keep pace with the progress that has lately been made in this direction.

The importance of adequate illustrations together with clear, comprehensive descriptions cannot be overestimated in a work on this subject, where it is often necessary to produce in the reader's mind a definite and accurate mental picture of a lesion that he has never seen, and the happy facility of the authors in word-painting is most adequately supplemented by a series of engravings and of plates in color that represent the acme of graphic depiction.

The difficulties of dermatological classification are proverbially great, but the authors have perfected an arrangement which is at the same time logical and yet convenient for rapid reference and for the purposes of differential diagnosis. The practical value of the work is still further enhanced by the enormous number of prescriptions and plans of treatment suggested for the different diseases.

SIMON'S PHYSIOLOGICAL CHEMISTRY.

Text-Book of Physiological Chemistry. For Students and Practitioners of Medicine. By Charles E. Simon, M.D., late Resident Physician, Johns Hopkins Hospital; author of *Simon's Clinical Diagnosis*, etc. New (2d) Edition. Revised and enlarged. Octavo, 500 pages: Cloth, \$3.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Dr. Simon has here treated Physiological Chemistry in a manner adapted to his work to the wants of the medical student, and of the physician who has previously been unable to devote to the subject the attention which it merits. It deals with foods, their origin, classes and decomposition products, their digestion, resorption and excretion, the chemistry of the tissues and organs of the body, the substances resulting from their activity and their relation to physiological function. The early call for a new edition has enabled the author to include the results of the very active research in this field to date. The chapters on the Albumins, Nitrogenous

Katabolism and Gastric and Tryptic Digestion have been rewritten. To render the work still more useful both to students and teachers, laboratory exercises have been added. The methods have been described in such detail that the student should find no difficulty in performing the experiments.

1

ARTERIA UTERINA OVARICA.

The Utero-ovarian Artery or The Genital Vascular Circle. *Anatomy and Physiology with their Application in Diagnosis and Surgical Intervention.* By Byron Robinson, B. S., M.D., Chicago, Ill., author of *Practical Intestinal Surgery*, *Landmarks of Gynecology*, *Life-sized Chart of the Sympathetic*, *Abdominal Brain*, *Colpoperineorrhaphy and the Structures Involved*, *The Meter*, *Gynecologic Charts of the Genetial Circulation.* E. H. Colgrove, 65 Randolph St., Chicago, Ill. 1908. Price, \$1.00.

This is a truly excellent work and reflects great credit on the care and skill of its author. The figures, several of which are colored, are works of art. In this the marvelous circulation of the utero-ovarian artery is amply displayed. The relations of the ureters to the artery and to the uterus are very clearly shown. The circle of Byron Robinson, made up of the aorta, illiacs, ovarian and uterine arteries and their branches, is of great importance as showing the wonderful anastomosis and blood supply of the uterus and its appendages. To the surgeon, the zones on the uterine surface, of limited vascularity as well as the position of arterial trunks, are of great importance. This is a work we can heartily recommend for careful study by every gynaecologist.

IN THE YEAR 1800.

Being the relation of sundry events occurring in the life of Dr. Jonathan Brush during that year, by Samuel Walter Kelly, M.D. The Sealfield Publishing Company, Chicago, Akron, O., New York, 1904. Price, \$2.50.

This is volume three of "The Doctor's Recreation Series," edited by Charles Wells Moulton. This volume purports to give the events occurring in the experience of Dr. Jonathan Brush during the year 1800. Dr. Brush lived in Farmerstown, in the Province of Maine. The book is said to be founded upon manuscripts left by Dr. Brush, rearranged. The book is certainly a clever one and will afford much genuine entertainment to its readers, and a good deal of insight into the state of medical knowledge one hundred years ago. Many of the incidents are told with much spirit, and in places, the author exhibits a very fine vein of pathos. The troubles of the doctor one hundred years ago were much the same as they are to-day—the jealousy of rivals and the gossip of the public

he style is thrown back into that of the period, and has the real smack of the old New England days. The book will afford much amusement and no small amount of information about an interesting time in the history of this continent. The observations of the main character in the book, Dr. Brush, are very shrewd and will often cause the reader to pause and think. If the science of medicine was not the same, the humanity of it was the same one century ago as it is to-day. In this respect the history of medicine has known no break since the days of Hippocrates.

WHO'S WHO, 1905.

This is one of A. and C. Black's publications, of Soho Square, London. The book is brought up to August 30th, 1904. The book contains a vast amount of reliable information regarding persons of note throughout the British Empire, home and colonial. It is biographical in character, and is of much value to everyone who may have occasion to look up the standing, age, titles, address, etc., of well known persons. The price, 7s 6d, brings the work within the reach of all.

THE ENGLISH WOMAN'S YEAR BOOK.

Messrs. Adam and Charles Black, of London, have performed to women a genuine service by the issuing of this book. The matter in the book is well arranged, and contains a great deal of useful information on education, employment, industries, medicine, science, art, literature, music, temperance philanthropy, charities, sports, etc., as concerning women. The price is 2s 6d.

ANAESTHETICS.

A Guide to Anaesthetics for the Student and General Practitioner. By Thomas D. Luke, M.B., F.R.C.S., Ed., Instructor in Anaesthetics, University Surgical Classes, Royal Infirmary, Anaesthetist to the Deaconess' Hospital, and the Dental Hospital, Edinburgh. With 45 Illustrations. Second edition. Edinburgh and London: William Green & Son. 1905. Price, 5s. net

When we reviewed the first edition of Dr. Luke's book on Anaesthetics, we took occasion to speak well of it, and to recommend it to our readers. The second edition is now before us. It affords us much pleasure to again endorse this excellent manual on a very important subject. There is no physician or surgeon who may not be called upon at any moment to administer an anaesthetic, and there is always some danger in doing so. It is well, therefore, to know the views of so competent an authority as Dr. Luke. The author discusses the choice of anaesthetic, nitrous oxide, ethylchloride, ether, chloroform, anaesthetic sequences

anaesthetic mixtures, apparatus, difficulties and their treatment, the preparation of the patient and after treatment, local anaesthesia, and anaesthetic commissions and investigations. This is a pretty full bill of fare, and it is well handled. The book is got up in a most attractive form. We have again much pleasure in recommending this carefully prepared book.

LAKE ON DISEASES OF THE EAR.

Handbook for Diseases of the Ear for the use of Students and Practitioners by Richard Lake, F.R.C.S. (Eng.) Second Edition London: 1904, Baillière, Tindall and Cox. 6s.

This is an excellent modern little manual, adapted for the use of students and general practitioners. The anatomy and diseases of the ear are set forth in a clear and comprehensive manner. It is well illustrated and got up and should be found useful for those for whom it is intended.

WHO'S WHO YEAR-BOOK, 1905.

This book is published by A. and C. Black, of London. It contains much tabular matter about societies, judges, courts, journals, governments, banks, etc. The matter is arranged alphabetically and is furnished with a complete index. The book is published at the small price of 1s, and forms an excellent companion to Who's Who.

DISEASES OF WOMEN.

Practical Manual of Diseases of Women and Uterine Therapeutics, for students and practitioners. By H. Macnaughton-Jones, M.D., M.Ch., Master of Obstetrics, Royal University of Ireland; Fellow of the Royal Colleges of Surgeons of Ireland and Edinburgh; formerly University Professor Midwifery and Diseases of Women and Children in Queens University, and Examiner in Midwifery and Diseases of Women and Children in the Royal University of Ireland; Ex-President of the British Gynaecological Society; Corresponding Member of the Gynaecological Society of Munich. Ninth edition. London: Baillière, Tindall & Cox; Toronto: J. & A. Carveth, and Chandler and Massey. 1904. Price, 21s.

Dr. MacNaughton-Jones' book on the Diseases of Women has long been before the medical profession. It is just twenty years since the first edition appeared. The book was then a rather unassuming little manual; but with each edition it has grown in size, and now contains over 1,000 pages and belongs to the publishers' well-known "University Series." The work contains 637 figures and 125 plates, some in colors. It is well bound and made up. The paper and press work are excellent. As one examines the contents of the work, the impression constantly grows that it would be difficult indeed to conceive of a more complete or perfect work

on the diseases of women. Every topic is covered and yet with that conciseness which is the best evidence of a thorough grasp of the subject. The descriptions of disease, pathological changes, and operations are very clear and direct. Both author and publishers deserve the highest praise for their efforts in placing in the hands of the medical profession such a classic on the diseases of women at the moderate price charged. It should be in the hands of every doctor who has anything to do with the subjects discussed by the author.

THE APPENDIX VERMIFORMIS.

The Surgery of the Diseases of the Vermiform Appendix and their Complications. By William Henry Battle, F.R.C.S., Surgeon to St. Thomas, Hospital, formerly Surgeon to the Royal Free Hospital; Hunterian Professor of Surgery at the Royal College of Surgeons of England, etc.; and Edred M. Corner, M.B., B.C., F.R.C.S., Surgeon in Charge of out Patients to St. Thomas' Hospital, and Assistant Surgeon to the great Ormond Street Hospital for Sick Children; Erasmus Wilson, Lecturer at the Royal College of Surgeons, etc. Chicago: W. T. Keener & Co., 1905. Price, \$2.50.

The appendix, like the poor, we have ever with us. Wherever two or three doctors are gathered together, there it is in the midst of them, an ever-present topic for discussion. Though the book contains a careful review of the literature upon the subject, it is mainly an original study of the cases which came under the authors' own observation. In seven years there were in St. Thomas Hospital 525 cases of non-suppurative appendicitis, 150 cases of localized suppuration, and 108 cases of general peritonitis. About 70 per cent. were in their first attack, 20 per cent. in their second, and 10 per cent. in their third. In appendicitis with localized peritonitis or localized abscess, the death rate was nil; whereas, in cases of diffuse peritonitis, the death rate was 84 per cent. The authors urge early operation in all cases of acute onset. The section of the book dealing with the "Acute Abdomen" is one of much merit. The work, as a whole, is an important contribution to the subject of appendicitis and should have a wide circulation. It is got up in the best possible style.

MEDICAL ELECTRICITY.

A Practical Handbook for Students and Practitioners. By H. Lewis Jones, M.A., M.D., Fellow of the Royal College of Physicians; Medical Officer in Charge of the Electrical Department in St. Bartholomew's Hospital, London; President of the British Electrotherapeutic Society; Honorary Fellow of the American Electrotherapeutic Association; Member of the Société Française d'Electrotherapie et de Radiologie. Fourth edition, with illustrations. Toronto: Chandler & Massey; London: H. K. Lewis, 136 Gower Street, W. C. 1904. Price, 12s. 6d.

This book is one of the well-known, indeed famous, "Practical Series" of Lewis. This book deals with electricity in its scientific aspect, as a therapeutic agent in medicine and surgery, with electric light, the electric

bath, X-rays, etc. The book is well illustrated and handsomely got up. In this work of nearly 550 pages, a great variety of subjects are discussed, and the use of electricity, in its different forms in the treatment of diseases, clearly indicated. To those who desire to become acquainted with the therapeutic applications of electricity, we can most cordially recommend this book of Dr. Jones. For many years, electricity was left too much in the non-professional hands, but conditions are changing, and it is becoming more and more apparent that like suggestion and massage, it has a place. Whether he cares to make personal use of it or not, every physician should be familiar with the best views upon the subject, in order that he may properly advise his patients.

THE ANATOMY OF THE BRAIN.

A Study of the Human Brain from the Brain of the Sheep. A Manual for Students in Medicine, Biology and Psychology. By J. F. Burkholder, M.D., Professor of Anatomy in the Illinois Medical College and the Illinois Eye, Ear, Nose and Throat College; Professor of Physiology in the Dental Department of the University of Illinois and the Dearborn Medical College. With an introduction by Prof. Henry H. Donaldson, of the Neurological Laboratory of the University of Chicago. 175 pages, Octavo, 32 full page Plates (5 colored). Cloth. Price \$2.00 postpaid. Chicago: G. P. Engelhard & Co., 358-362 Dearborn Street.

The joint authors of this book, Dr. Burkholder and Professor Donaldson, have long been known as close students of neurology, especially from the standpoint of anatomy and physiology. The work before us is an excellent exposition of our knowledge of the anatomy of the brain at the present moment. The work is not too large and makes a good manual for those who wish to gain a knowledge of this important subject.

A MANUAL OF PERSONAL HYGIENE.

Proper Living upon a Physiologic Basis. By American Authors. Editors by Walter L. Pyle, A.M., M.D., Assistant Surgeon to the Wills Eye Hospital. Philadelphia. Second Edition, Revised and Enlarged. 12mo volume of 441 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Bound in Silk, \$1.50 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

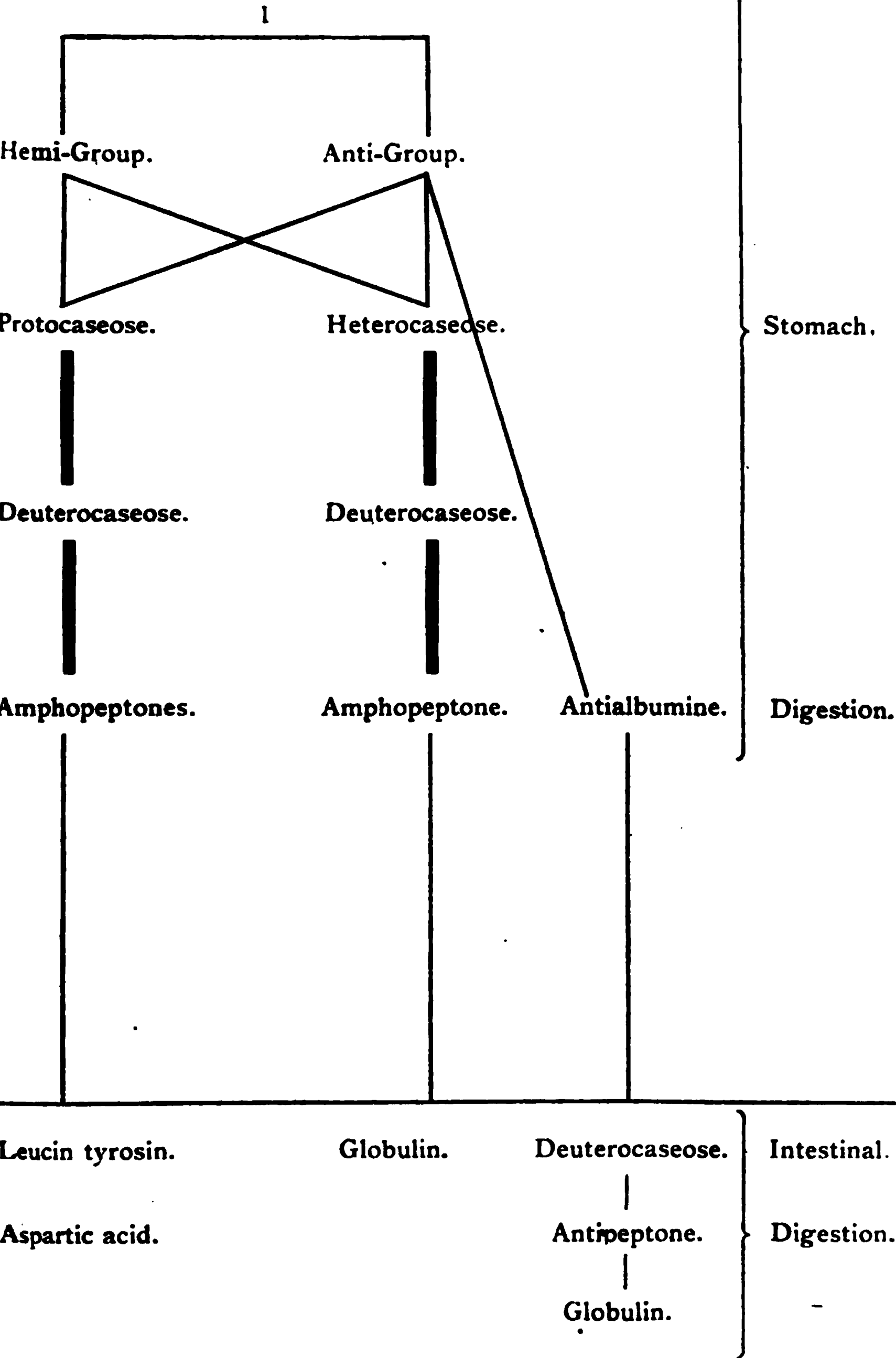
A short time ago, when Dr. Pyle's work first appeared, we gave it our unqualified recommendation. The new second edition, just issued, is evidence that his work has filled the need. Personal hygiene is applied physiology, and a proper understanding of certain elemental truths

children are of secondary origin, consequently it is not difficult to ascertain the causes. The tendency may be transmitted from the anaemic, poorly nourished patient; in sufficient quantity an improper kind of food is usually the chief cause. The infectious or constitutional conditions such as rickets, syphilis, tuberculosis, malaria, rheumatism, etc., are responsible for the great majority of cases of secondary anaemia, and usually present one or more distinctive symptoms indicating their origin. The thing most desired in the treatment of these conditions is naturally to remove the cause, which is sometimes possible but not always; a careful study of the blood should be the first step after which its proper treatment, for by this means one can often remove the subjective symptoms of the anaemia, thereby making the patient more comfortable as well as reinforcing the treatment of the cause.

In the endeavors to restore the normal standard of the blood in cases of secondary anaemia, dietetic and hygienic measures are of greatest importance. A careful study of many cases shows conclusively that a large proportion of the cases which owe their origin to conditions prevalent among the poorer classes—improper food, poor air, lack of exercise—are the prime causes. A correction of these defects with proper feeding, fresh air and tonic, will bring about the desired results without the necessity of much drug medication. But in those cases in which the anaemia is secondary to the infections, the diathetic or hygienic measures can be supplemented by the application of proper medication; the treatment then becomes one of removing the cause of the anaemia, at the same time reinforcing the system by proper nutrition. The most frequently employed drugs as blood reconstructors, are iron and arsenic, but their field of usefulness is limited. They undoubtedly produce a tonic effect by stimulation, but lack the proper elements to build up the newly born cells as the result of this stimulation, consequently their therapeutic value is limited and something more complex is required. Too short a space is allowed to enumerate the many cures laid down by various clinicians in the treatment of anaemia. All have virtue more or less, none are complete. Most of the tonics of iron will increase the blood cells without a corresponding increase in the haemoglobin, consequently, many of the new born cells never reach maturity but become shrivelled, disintegrated or paralyzed as a result of the mal-nutrition. With this clinical picture before me I naturally sought for something that fully covered the field, in other words a tonic, stimulant and complete food. The combination of the three making the essential whole I found in Bovinine, and its employment in many cases has proven it to be a most valuable diathetic and therapeutic agent. ,

T. J. BIGGS, M. D.

Molecule of Casein.



The above table shows the relative part played by the Anti-Group and Hemi-Group in the formation of secondary products.

In it we see that the Protocaseose comes chiefly from the Hemi-Group, but that there is also a small contribution from the Anti-Group.

On the other hand the Heterocaseose comes chiefly from the Anti-Group, but the Hemi-Group also contributes a part. Both the Protocaseose and the Heterocaseose by the prolonged action of the Gastric juice are transformed into Deuterocaseose; but the Deuterocaseoses will in each case be more or less different in their intimate structure. The difference between them is the difference in the proportions contributed to each by the Anti-Group and the Hemi-Group.

The Deuterocaseose by the further action of the pepsin in an acid medium is converted into amphopeptone. The Hemi-Group predominates in the Amphopeptone formed from the Protocaseose, whereas the Anti-Group predominates in the Amphopeptone formed from the Heterocaseose. A further step in the gastric digestion of casein is the separation from the Anti-Group of a small part which forms Anti-Albumin. This Anti-Albumin is but very slightly acted on by the pepsin, but on reaching the intestines the action of the trypsin converts it into Deuterocaseose and later into peptone.

The peptones derived from the Anti-Group, during their passage through the intestines are acted on by a special ferment and changed to serum albumin or Globulin.

It is as Globulin that all the products of digestion reach the blood to supply the loss by metabolism and to create new protoplasm.

This theory of digestion which was originally propounded by Kuehne and Chittenden is at present accepted by A. Gauthier and most physiologists. It is now supported by the results of numerous very exacting experiments.

The reign of obscurity has now passed and we are able to give an exact account of the work performed in the gastro-intestinal tract. Globulin is the last step in the process of digestion of albuminoid matter. This albumin forms the human albumin and replaces the broken down products of metabolism and thus acts as a nutrient and a tissue builder. It is then ready to be used as required by the individual cells. It differs from peptones in that in a given weight of peptones there is always a large amount which is reduced to crystallizable substances (Leucine, Tyrosin and Aspartic Acid) and which serve no useful part in the nutrition of the body. There are none of these in Globulin and consequently all of it is assimilated. All the substances derived from the Anti-Group give rise to these same crystallizable products.

Lactoglobulin is an exceptionally fine form of Globulin. It is very carefully prepared by the Lactoglobulin Company, of Montreal. It has proven itself to be an excellent nutrient.

TWO FINE PICTURES.

We have recently received an enlarged copy of the above picture, "The Doctor" by Luke Fildes, together with one of "The Anatomy Lesson," by Rembrandt, size 13 by 17 inches, from the Angier Chemical Company, Allston District, Boston, Mass. This firm is sending them to physicians only, on receipt of ten cents to cover cost of mailing. Both of these pictures are worthy of a prominent place in any physician's office.

THE POINT OF VIEW.

"A cigarette, a glass of water and the kiss of a pretty girl will sustain a man a full day," according to a Spanish proverb. Sentiment apart, there must be reasons for the popularity, now almost universal, which the cigarette has attained.

Taking the "Sweet Caporal" cigarette—which is deservedly the most popular of all—as an example, we find that competent chemists have analysed and tested it, and, in the words of one of them, it is "made from well selected, clean tobacco leaf and a purified article of harmless paper." Giving a much lighter smoke than the pipe, the cigarette has the additional advantage of being in direct contact with the air, so that its smoking causes none of the bad effects of incomplete combustion.

To sum up the whole subject, whether we take the standpoint of the medical or scientific man, or the point of view of pure enjoyment, we arrive at the same conclusion—that the Sweet Caporal cigarette is the purest form in which tobacco can be smoked.

SANMETTO IN NOCTURNAL EMISSIONS AND PROSTATIC AND URETHRAL TROUBLES.

I have been using Sanmetto ever since it has been before the medical profession. Sanmetto, as prepared only by Od. Chem. Co., New York, has never disappointed me, but substitutes have. The scope of usefulness of Sanmetto is much more, in my humble opinion, than has ever been claimed for it. In nocturnal emissions, resulting from self-abuse, I have found Sanmetto very nearly a specific, as well as in all prostatic affections. For a number of years Sanmetto has been my sheet anchor in gonorrheal troubles.

L. L. JANEWAY, M. D.

Whitewell, Tenn.

DURING LA GRIPPE AND AFTERWARDS

the experience of thousands of physicians proves the value of Angier's Petroleum Emulsion. It braces the patient, enables him to withstand the ravages of the disease and guarantees him freedom from the subsequent exhaustion and sequelae. Angier's Petroleum Emulsion promptly relieves the cough and symptoms of respiratory irritation, palliates the nervous symptoms and hastens convalescence.

KRESS AND OWEN V. CRUTTENDEN.

A short time ago, Mr. Thomas Cruttenden was convicted by Magistrate Denison for infringing on the trade mark of Glyco-Thymoline, owned and registered in Canada by Messrs. Kress and Owen

LA GRIPPE AND ITS SEQUELAE AGAIN PREVALENT.

The following suggestions for the treatment of la grippe will not be amiss at this time when there seems to be a prevalence of it and its allied complaints. The patient is usually seen when the fever is present, as the chill, which occasionally ushers in the disease, has generally passed away. First of all, the bowels should be opened freely by some saline draught. For the severe headache, pain and general soreness give an antikamnia tablet, with a little whiskey or wine, or if the pain is very severe, two tablets should be given. Repeat every two or three hours as required. Often a single dose is followed with almost complete relief. If, after the fever has subsided, the pain, muscular soreness and nervousness continue, the most desirable medicine to relieve these and to meet the indication for a tonic, are antikamnia and quinine tablets. One tablet three or four times a day, will usually answer every purpose until health is restored. Dr. C. A. Bryce, editor of "The Southern Clinic," has found much benefit to result from antikamnia and salol tablets in the stages of pyrexia and muscular painfulness, and antikamnia and codeine tablets are suggested for the relief of all neuroses of the larynx, bronchial as well as the deep seated coughs, which are so often among the most prominent symptoms. In fact, for the troublesome coughs which so frequently follow or hang on after an attack of influenza, and as a winter remedy in the troublesome conditions of the respiratory tract, there is no better relief than one or two antikamnia and codeine tablets slowly dissolved upon the tongue, swallowing the saliva.



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SKETCH OF THE BEGINNING OF MEDICAL EDUCATION IN YORK, OR AS IT IS NOW CALLED, TORONTO.

By WALTER B. GEIKIE, M.D., C.M., D.C.L., Toronto.

For several years before there was any regular medical school in Upper Canada—as early as during the “thirties,” The late Hon. Dr. John Rolph, who is deservedly known as the “Father of Medical Education” in the Province, was in the habit of receiving pupils into his house in York (now Toronto) from various parts of the country, to whom he gave a very thorough medical education, which he was exceptionally well qualified to do. Born and thoroughly educated in England, he was one of the most highly gifted of the many prominent men of that day who, in various walks of life, made Upper Canada their home. Although a member of the legal profession, having been called to the bar in London, England, and a member of the Inner Temple, he was also a favorite pupil of Sir Astley Cooper, and a member of the Royal College of Surgeons of England. He loved the medical profession dearly, and was never happier nor more at home than when teaching its various branches to the young men whose good fortune it was to have so able and interesting a teacher. Some of his early pupils subsequently became distinguished, and many still occupy high positions as medical teachers and practitioners.

The Rebellion of 1837, which interfered with this work, however its occurrence may be regretted, proved to be an event which did much good to Canada in bringing about the peace, happiness, and perfect freedom she has now for many years past enjoyed. Dr. Rolph, who was a Hampden in his love of political freedom, was, as may be supposed, one of the leading reformers of the time, and sympathized with the movement in which he became more or less involved. The attempt at armed rebellion having speedily and fortunately failed, some of its promoters were arrested, and others fled the Province. Dr. Rolph was amongst the latter, and went to Rochester, U. S., where he resided and practised his profession till 1843, when the Canadian Legislature passed an act, of which he took advantage, permitting all exiles for political causes to return to Can-

though the latter did all their work in so primitive a college building, and were not allowed the use of illustrated books or plates to any extent, but were obliged to study and trace out for themselves every part, great or small, of the human body, and were constantly and thoroughly examined in their work as they did it.

Dr. Rolph himself never neglected this latter essential part of a student's training. Speaking of the founding of his school in an Annual Announcement issued a good many years later, he says that his School of Medicine was founded in 1843, and incorporated by Act of the Legislature in 1851, so that this school was really the first medical teaching body established in Upper Canada, and it was from the first entirely self-supporting. In the summer of 1850 a great advance was made by this medical school. Dr. Rolph, at his own expense, built a new brick building adjoining his house on Queen St. West, the north side, a few doors west of Teraulay St. The upper part of this building was reached by a stair leading direct from the street, and consisted of two large rooms, one of these being nicely fitted up as a lecture-room, and the other as a museum. The latter had on its walls, and on both sides of a special arrangement which extended from one end of the room to the other, a very large number of carefully prepared anatomical specimens—the work of industrious, painstaking students. These preparations made the museum attractive and very useful to the more studious members of the medical classes. At the same time, the old Sunday School building of Richmond St. West, on the Knox Church property, and then as now, owned by that church, was rented and fitted up by Dr. Rolph as a second lecture-room. Half of this building is still standing, and may be easily seen inside a high fence, just opposite the Methodist Book Room. Some of the medical lectures were delivered in the Queen St. lecture-room and some in that on Richmond St., and the students had a short walk and some fresh air in going from one to the other. The old dissecting-room in the yard of the Queen St., house was still used, and did good service for some time. After these changes, which in themselves indicated prosperity, the school suffered for a short time from the withdrawal of Dr. Rolph, who re-entered political life and accepted a seat in the Cabinet in 1851. He returned to his college duties with great pleasure in 1855.

"*The Toronto School of Medicine*," in 1854, by arrangement with the Board of Victoria College, became the medical department of that university—it being considered that such an arrangement would be mutually advantageous. The connection of the Medical School with this institution, while adding to the prestige and influence of the latter, would enable students who desired to do so, to proceed to their degrees in medicine instead of taking only the license of the Medical Board as heretofore.

In 1856 a large building, formerly used as a church on "Little Jarvis St., Yorkville" (now No. 10 Bismark Avenue), was purchased and fitted up for the newly-formed "medical department," and for a good many years afforded ample accommodation and every facility for medical teaching in the many subjects students have to study.

Some difference in connection with the school arose between Dr. Rolph, who was the Dean of the Faculty, and his colleagues, soon after these changes had taken place. Most of his colleagues had been educated in medicine chiefly, and some solely by himself. The Victoria College Board supported Dr. Rolph on its being appealed to in the matter. On this account his colleagues resigned in a body just the day after the opening of the session of 1856-7. The University authorities accepted the resignations which had been sent in, and directed the Dean, as the responsible head of the department, to fill the places of the gentlemen who had retired, as well and as speedily as he could. Although placed in an exceedingly difficult position, the Dean proved himself quite equal to the occasion. During the little more than two weeks it took him to complete new arrangements for carrying on the work of the session, Dr. Rolph alone, kept everything going on in the college. He lectured during this period four or five times every day on the various subjects to the entire satisfaction of the students, who, with hardly an exception, stood by their able teacher and Dean.

The high character of the Dean's teaching during this time, made it more difficult, than it would otherwise have proved, for the new professors whom he called in to his aid and appointed the vacant chairs. He soon succeeded, however, in filling these to his satisfaction, and throughout Dr. Rolph's Deanship, which lasted till 1870, this Medical School was singularly prosperous. He, for a time, continued to use the name as advertised when the arrangement with Victoria College was first entered into, which was "The Toronto School of Medicine—the Medical Department of Victoria College." The professors who had resigned as they constituted a majority of the members of the Corporation of the "Toronto School of Medicine," lost no time in renting a building from the University of Toronto, in which they established themselves under the old name of "The Toronto School of Medicine." They soon applied for an injunction to restrain Victoria College and Dr. Rolph from continuing to use the name of "The Toronto School of Medicine." The decision of the Court was adverse to the Victoria College and Dr. Rolph (who acted as his own counsel), and the injunction was granted on the ground that as "The Toronto School of Medicine" was a corporate body, no arrangement such as that alleged to have been made by "The Toronto School of Medicine" with Victoria College could be legally catered into without an Act of the Legislature authorizing the School to make such an arrangement, and that, as this had not been done, the arrangement made was le-

gally null and void. Unquestionably neither of the parties interested had thought of such a thing being necessary when the arrangement was entered into.

This decision was of no moment so far as Victoria College and Dr. Rolph were concerned. The students and the general public knew well that "Rolph's School," as it was called, was wherever Dr. Rolph was teaching, and the Medical Department of Victoria was thereafter advertised as such, with the addition of the words, "Commonly known as Rolph's School," which answered every purpose. From year to year, with the Dean at its head, this Medical Department steadily grew in public favour—year by year, and was for years the most largely attended Medical College in Canada.

Having become enfeebled somewhat by age, and disapproving of the course which at the time was adopted by Victoria University, he resigned his position as Dean in 1870 being then in his 78th year. Some of his colleagues who sympathized with him also resigned at the same time or very soon after and before very long Trinity Medical College was set by the writer which up to 1903—32 years—played a most important part in Medical Education in Ontario. It was very successful during its entire existence till it was unexpectedly put an end to in 1903 by amalgamation with the University of Toronto Medical Faculty.

The Toronto School of Medicine continued to teach, under this name, till 1887, when its members, with a few additions, became the Medical Faculty of the University of Toronto, under the University Act of that year.

Dr. Rolph, after his resignation, retired to Mitchell, Ont., but did not long survive his retirement. He died in Mitchell in 1870, and was buried there. More than twenty years later his remains were removed by his family, and buried in Mount Pleasant Cemetery, Toronto. Mrs. Rolph, who survived her husband a good many years, lies buried by his side. Dr. Rolph's grave is still without a fitting monument to a medical teacher of his zeal and ability.

ARTHRITIS DEFORMANS.

By F. W. E. BURNHAM, M.D.C.M., Winnipeg.

In the possession of the Royal College of Surgeons are bones obtained from Fayoum, a town of the xviii Dynasty, about 1300 B. C., which shew the unmistakable evidences of periostitis arthritis deformans and senile atrophy among the Ancient Egyptians.

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shafts of the long bones are uniformly covered with a thin layer of bone, while the extremities exhibit the changes which are characteristic of arthritis deformans. The specimens are interesting in showing the antiquity of a disease to be found in every quarter of the globe accompanied by such definite pathological changes that its origin is not doubtful. Some authorities even in view of recent innovations have refused to consider it a disease *per se* and include under the term osteo-arthritis, all the conditions which in the lay mind are referred to rheumatic taint.

The pathological features of arthritic affections are more carefully studied than the dividing line, which in some cases for a time is not clearly well in the majority be sufficiently clear to permit of a diagnosis. It may be admitted that rheumatic arthritis is an infectious and, irrespective of the treatment pursued, a self limiting disease confined to the synovial membrane and leaving the joint in a condition approximating normal. In such cases there will be no danger of confusing it with a disease which produces such definite and permanent changes as does arthritis deformans. A question is often asked whether arthritis deformans is not a frequent local continuation or result of acute or chronic rheumatic arthritis.

The occurrence of the two diseases in the same anatomical structures locally is doubtless possible but improbable. Clinically much may be said in favor of the identity of the two diseases but pathologically, they have little in common, and on more careful investigation it will be found that the two rarely occur either consecutively or concurrently.

The non-occurrence of cardiac complications in arthritis deformans is an argument against the identity of the two affections. The prevalence of the disease among women in some statistics amounts to as much as eighty per cent. and among the laboring classes of the poorer districts is probably due to diminished vitality of the tissues, and deficient nourishment.

Age is a factor which must be taken into account and as a senility is productive of conditions in the joints which have erroneously been considered indicative of rheumatoid change. Further reference may be made to this feature. The conditions which are usually accepted as pathological indications of rheumatoid arthritis consist in fibrillation of articular cartilage followed by its subsequent removal accompanied by increased thickness of articular bone and its eburnation.

Calcium is deposited around the margins of the articular surfaces, later forming lamellae, and even in the synovial membrane. The fibrillation of cartilage followed by its subsequent removal has been thought to be a characteristic feature of the disease. Fibrillation of cartilage however,

is merely a degenerative change and is found as such in Charcot's disease and in the senile state. Cartilage has but feeble vitality. In the senile state it would be expected that structures of low vitality would suffer first. Fibrillation of cartilage followed by its subsequent absorption, like the change in color of the hair with later falling out, occurs as a senile change and in no sense necessarily indicates arthritis deformans.

The absorption of articular bone in Charcot's disease and to a less extent in senile atrophy is a continuation of the degenerative process.

With the absorption of cartilage and articular bone the similarity of the two latter with rheumatoidal change ends.

In articles on the pathology of this disease the absorption of cartilage antedates eburnation of bone. This I think is not always in accordance with the facts. Sclerosis of articular bone with new bone formation, I take to be the primary change and the feature which distinguishes arthritis deformans from those arthritic affections which are of a purely degenerative nature. In arthritis deformans, partly to sclerosis of the subarticular osseous lamellae interfering with the vascular supply and partly to attrition is due the secondary degeneration and disappearance of cartilage.

The degree of the absorption of bone and the form which the articular ends assume are dependent upon mechanical causes and the density of the opposing articular surfaces.

The disease is supposed to attack by preference, the larger joints.

The reason of this possibly is, that the changes when limited to the smaller joints are not serious enough to call for treatment or are overlooked.

It is thought by some that the hips are most frequently attacked the phalanges being last and by others the order is reversed. It is not difficult to find numerous examples of rheumatoidal changes solely confined to one or more phalangeal articulation in people who complain of an increasing stiffness of the joints. Clinically the progressive and remittent forms may be recognized, in the former the process never leaving a joint until it has been rendered useless, the latter being characterized by periods of remission during which the disease may be said to be dormant.

The remission is responsible for much of the confusion in diagnosis, in this the attacks come on more or less acutely and after a variable period partially subside and come to a standstill, each recurring attack however, rendering the joint less useful. It is not surprising then that patients with the remittent type of rheumatoidal arthritis date their illness from what was supposed to be an attack of rheumatic fever.

In the simplest form it is found in the enlargement of the natural phalangeal tubercles, the so called Heberden's nodes. It is seldom that

THE PROGRESS OF MEDICAL SCIENCE DURING THE PAST 35 YEARS.*

By W. H. MOORHOUSE, B.A., M.D.,

Dean of the Medical Faculty, Western University, London, Ont.

Mr. Chairman and gentlemen,—Allow me on behalf of the Faculty to thank you for the kind and hearty manner in which you have received this toast and, at the same time, to assure all who are here, that the Medical Faculty of the Western University, have now, as in former years, deeply at heart the welfare of all the students under their care, and, in saying this, I feel that I am echoing the sentiments of each and every member of the Faculty.

Owing to the Ontario Medical Act, passed about 35 years ago, our standard of medical education, in this Province, is as high as that found in any country, and higher than that which prevails in many countries. The standard of medical education, as you all know, is in the hands of The Ontario Medical Council, which, year by year, watches over the curriculum with a most zealous eye, lest some of its requirements be passed over lightly by some of the various teaching bodies. Your council keeps a keen watch over the advancement of medical science throughout the world, especially the improved methods of teaching in foreign schools, which are rapidly adopted and laid down in the curriculum for the guidance of the various teaching bodies or faculties in our Province, all of which are obliged to work up to this standard. The work of each medical school is thus put to a fair, practical test, inasmuch as the annual contingent from each school is subject to the same ordeal, which I am obliged to say, in justice to the Medical Council, is of a fair and practical character. Here there is an impartial test of the kind of teaching given in each school. I am also, in justice, obliged to say—and I say it with considerable pride—that the men from our school have done their Alma Mater credit and long may they continue to do so.

The life of a medical student is an arduous one during his college course—that is if he does it and himself justice.

When I look back through the past 35 years, and see how entirely changed is the curriculum of studies, how much has been added to it—old theories, which at that time were taught with minute care and exactitude, have now been exploded and a new order of things has taken place.

When I take a careful survey of some of the newer theories and innovations in the field of science, and especially in medical science, I am tempted to exclaim where will it all end? What great surprises are there still in store for us? There is no doubt that each decade will add its quota—for this is an age of keen investigation. In no other time of the

*An Address delivered at the Banquet of the London Medical College.

It was only then that his fellow countrymen became convinced of the truth of the principles of the great germ theory of disease.

Since that time I am pleased to say that the medical world has been more thoroughly on the alert to grasp the earliest hints along the line of advancement.

From the germ theory of disease has sprung that great and important branch of Medicine—Bacteriology—which, of itself is one of the greatest boons to humanity. Through this branch have been given many priceless gifts in medicine as well as in surgery, among which are the various antitoxic serums or serum Therapy, by which those about to be exposed to contagion can be rendered immune, and those who have contracted the disease can have it aborted.

Bacteriology, properly comes under the head of Sanitary Science or preventive medicine, and the day is not far distant when each municipality will consider the bacteriologist one of its most important officers, for the detention and stamping out of disease.

Many other discoveries of a valuable nature have been adding largely to our armamentaria, such as the animal extracts by which certain glandular excretions are made use of in correcting or modifying defective nutrition. Then there is the x-ray treatment and the assignment to its proper place as a therapeutic agent, of that wonderful, ethereal substance electricity, which no man, as yet, has been able to define.

All these marvellous improvements in the medical and surgical world, with many others equally wonderful, have slowly and patiently come about, and have been the work of many heads and hands, but certainly and surely have they supplanted our older theories. New terms, and new uses for old terms, have arisen.

All this makes work for the teacher and student as also for the progressive practitioner.

Much as has been done in the past, there yet remains a vast amount to be done in the future.

The ordinary lay mind cannot readily grasp the almost insurmountable difficulties which beset the original investigator of disease. It is ever wrapt in mystery, difficult to unravel. Disease and even life itself are subtle unseen influences, following no ordinary known law, or regular order. All diseases have certain symptoms in common, yet have certain material differences which are often obscured.

When the cause of a disease has been made known, one of our greatest difficulties has been removed. Fortunately this germ theory explains much that has hitherto been dark and abstruse. We hope and confidently expect in this way to clear up and put on a satisfactory basis many hitherto intractable diseases, which have relentlessly scourged the human race.

PHARMACOLOGY — GENERAL CONSIDERATIONS OF THE MODIFIERS OF NUTRITION.*

By PROFESSOR POUCHET, PARIS.

THE study of the modifiers of nutrition is the subject of our attention this half year. I would like to-day, as a point of introduction, to trace the outline of this subject; to make you seize the considerable importance of this very complex group, constituted from alimentary substances, physical agents and medicinal substances; to show you how we pass from one to another, so to speak, without transition; to make you feel the influence of the physico-chemic rule of the vital force in the realization of these modifications, and the way in which it may be modified in turn; finally, to try to classify these objects of our study. In order to do that, it is necessary first to consider, from a very general point of view, the phenomena of nutrition as well as the disturbances they may experience.

All living beings need, in order to preserve their functions and renew their substance, some complex, nutritive agency, containing both organic and mineral materials. Among these elements some seem to exercise a preponderant influence, but, in reality, all are indispensable. The most typical example, one can furnish for this subject is Raulin's liquid, in which the least change, either qualitative or quantitative, quickly determines an accentuated decrease of proliferation even in certain cases, the sterilization of the medium. The presence of very small quantities of certain bodies, such as zinc, matter very little, having no other effect than to hinder the invasion of the medium by strange germs; that which we ought to keep is the necessity for intervention by this or that substance, and that in determined proportions so that the normal evolution of the culture may go on.

Before making an integral part of a living organism, all substances, which will be assimilated later by that organism, ought to undergo modifications more or less profound, enabling them to adapt themselves to the special and proper conditions for the manifestation of the physico-chemic phenomena, characterising life. As a certainty, simple variations of quantity produce accentuated changes in the molecular equipoise, and bring about a veritable perversion of the normal state.

All chemical compounds and physical forces exercise an influence, more or less marked, either on the very elements of the nutritive medium, or by the method through which the syntheses operate, that is to say, of which the vital medium is constituted. Certain substances, or certain conditions, acting by external influence and to which we give the name

*The opening lecture of a course on Pharmacology and Materia at the Medical Faculty, Paris, Session 1904-5.

of *circumfusa*, show a very peculiar affinity, and constitute the point of departure from these modifiers of nutrition of which alterants form the most decided expression, applying to this term alterant its entire significance, considering it as a profound modifier, capable of introducing important changes, often disagreeable, into the composition of solids or liquids, but especially of the blood.

In most of the treatises on therapeutics, we meet this definition: The name alterant is given to those remedies which by long usage without producing immediate and sensible effects, modify in a persistent manner the nature of the blood and the various fluids. The alterants ought to be considered as agents of substitution. They only act clearly when substituting a curable malady for a chronic or incurable one.

In order to make my thought clear, I will cite some extreme examples on this subject: An exclusive flesh nourishment and confined air are the evident and primordial causes of disorders in the evolution of the regular phenomena of nutrition. On the other hand, I take mercury as a type of alterants and will recall to you its exciting action, almost to salivation, indicating a state of saturation of the economy, pretended necessary for therapeutical action, that which the verses of Fracastor depicts so eloquently in his poem "*Syphilidis, sive de morbo gallico.*"

"Liquefacta mali excrementa vidibis

Assidue sputo immundo fluitare per ora.

Et largum antè pedes tibi mirabere flumen."

Truly, this conception of alterants is sensibly modified, and we are forced to limit their role to that of simple modifiers of the living cell, capable of restoring the anatomical elements from a morbid state to a healthy state. Under this title all remedies are alterants. In the sustained conflict between the foreign substances and cells, one looks for an attempt to provoke a special action over the anatomical elements rendering them incapable of becoming or of remaining the basis of the malady, of the functions doing duty by morbid means, or of constituting a proper soil for development, as to whether the malady belongs or not to the group of microbes. Such is the action of mercury as an antisyphilitic. The end that is proposed is the realization of an incompatibility between the soil and the morbid cause, as that which is found to exist following a former contamination or vaccination.

But the same causes of derangement of normal evolution exist everywhere: in the air we breathe; in the aliments serving to build up our tissues; in the vicious preponderance of activity given to such or such an organ, to such or such a function, or, indeed, on the other hand, in the exaggerated repose in which we maintain them; in the meteorological conditions of the land of which we are natives; in the establishment of

social order, such as gaiety, sadness, etc. ; just as the means of remedying the cause of perturbation are in evidence everywhere—in the physical agents surrounding our organs, those which are called the environments ; in methodical exercise of the organs and functions ; and in the meteorological conditions in the midst of which we live.

Observation has taught for a long time that on this side or that of a certain mean, there are some influences which remaining without action on a normal organism, are capable of becoming the cause of troubles more or less accentuated and that disease may even result from the prolongation only of a habitual nutritive error, so that the economy suffers excessive wastes, or remains encumbered by materials insufficiently elaborate, or imperfectly or too slowly eliminated, those materials of decay constituted by different principles however, from those which have been introduced into the body, the aliments, and from those which remain fixed by the state of the tissues or the fluids in the organism. It has been noticed, so to speak, at all times, that the quality and activity of metamorphosis undergone by living and organized material, in other terms the activity of nutritive mutations, vary with age, the weight of the body, sex, the regime, exercise, the temperature, light, the barometric pressure, to speak only of the conditions accessible at our actual means of investigation. This double movement of assimilation or simultaneous disassimilation is characteristic of living organized matter, and metabolism is a fundamental property of organized substances by simultaneously manifesting the two groups of nutritive phenomena, that is to say, of presenting a continuous molecular renovation.

The materials destined for assimilation undergo a particular elaboration, by the power of organized substance itself, before becoming an integral part of the organism. It is thus that cane sugar introduced into the body by means of an intra-venous injection is eliminated unchanged and without producing anything else than troubles, more or less accentuated, of the regular phenomena of nutrition ; but when it is introduced by the mouth it undergoes in the digestive canal modifications which transform it into glucose, permitting it to be completely assimilated. It is the same for albumin which is eliminated without sensible modifications, by the kidney after intra-venous injection, while the peptones which are formed in the digestive canal are indispensable for organic repair. We ought to conclude that the secretion of diastase is absolutely necessary. But besides, in order that nutrition may be effected, it is necessary that the organized substance may be placed in a convenient medium, that is to say in certain conditions of temperature,

moisture, etc. If one of these conditions or indeed the organized substance itself should vary, nutrition would be restrained.

Without delaying here on these slow and continual modifications, which the organized substance always undergoes, and which are the testimonies even of life, I wish to draw your attention to the more abrupt modifications which are the work of an alterant, or of a cause of nutritive disturbance. The principal influence is then exercised by the intervention of the changes brought about by assimilation. All the vital powers are, indeed, subordinate to that metabolism of which I spoke a short time ago, which ought to be considered as an elementary quality, the most general, the most simple and the most characteristic of life, constituted by the material replacement, molecule for molecule, of the anatomical elements, from which results the apparent support of the organism in its primitive state.

Some of the troubles in the physico-chemic actions characterizing the life of the cells may be provoked either by modifications brought about in the phenomena of assimilation, or by modifications brought about in the phenomena of disassimilation. These two kinds of disturbances are then characterized by troubles of absorption and by troubles of secretion, these latter being provoked, above all, by the retention of decayed materials. It results from this that these are the grand functions of nutrition: digestion, circulation, respiration, and urination, which are the most directly modified. It would be to make use of an insufficient and blind treatment, consequently dangerous, to seek to set up a remedy for the troubles of these functions directly, without being occupied with their origin.

The animal organism is an energetic agent of the production of synthesis by oxidations and successive reductions, divisions, hydrations, dehydrations; and we know by experimenting that the influence of the agents, in the function of their physico-chemic constitution, is of primordial importance in the determination and regulation of these various phenomena.

The nutrition of the anatomical elements is effected by the intervention of the sanguine plasma. So the modifiers of nutrition will come to be essentially the modifiers of sanguine plasma, either as these modifications are slowly realized, under the influence of an alimentary regime, etc., or as they may be abruptly brought about, under the influence of some medicinal substances. In all cases the proofs will be the same, and they will be hindered through an obstacle from manifesting the phenomena consecutive to the acts of nutrition or indeed by troubles in the acts peculiar to the anatomical elements.

A substance active on the organism, whether it be a question of a substance foreign to that organism, or of one which regularly makes a portion of it, but which is then introduced into it in a proportion notably different from that under which it is usually contained in it, may show that activity in different ways. It may act on the cellular protoplasm and there determine phenomena of coagulation or liquifaction; it may excite the membrane covering the cells, stop its functions, particularly absorption, and influence thus indirectly the vital processes. It may yet settle itself on the nucleus or on any other parts morphologically different from the cell, and induce disorder in their functions. On the other hand, a certain number of toxic substances localize their effects on some of the products of the differentiation of proto-plasma, such as hemoglobin, nervous substance, muscular tissue, etc.; others localize their effects on the products of elaboration of protoplasm, such as diastases; others, in short, are capable of forming combinations with the elementary materials, and the reserves included in the cells, as albuminoids, hydrate of carbon, fats, mineral salts, and may give rise in this way to nutritive disorders. In short, and this is not the least important point to consider, another injurious action may be put into play through a succession of phenomena of osmosis varying from simple dehydration, more or less pronounced, almost to the plasmolysis and to the death of the cell.

The fundamental importance of blood plasma rests, above all, in the fact that it furnishes energy to the active substances, capable, by their intermediary powers, of disseminating into the whole organism and of exercising their effects *in situ*. But, as the recent researches of M. René Quinton have shown, the blood plasma enters only as a feeble part into the composition of the liquid which he calls the vital medium and which he considers as the medium of culture for living cells. This vital medium, which bathes all the cells, forms a singular whole, constantly clarified and renewed by the haemolymphatic or sanguine circulation on the one hand, through the phenomena of osmosis and diffusion on the other hand. The living material can find the elements for their continual renewal in this vital medium. An alteration, more or less profound or prolonged, in its composition, ought, therefore, to bring about certain modifications, more or less evident, in the evolution of the phenomena characterizing nutrition, which may be readily changed by a chemical or microbic poison, the insufficiency of the emunctories, the defect or excess, of certain alimentary actions.

One can thus realize an indirect action on the living substance by modifying the medium in which it lives, that is in which the physico-chemic phenomena, are affected permitting the renovation and accomplishment of the physiological acts for which it is destined.

The substances employed in these conditions will be modifiers of nutrition by opposition to the modifiers of the nervous system, of the muscular system of the heart, and circulation, etc., which concern themselves more especially with a tissue or determined structure. But it is not necessary to disguise them, as there is an apparent precision only in the definition; and, just as we have already many a time observed the same substance re-enters into several different groups, according to the diligence with which we seek to realize it. Whatever may be done on the other hand, it is not possible to avoid a complexity of actions due to an influence exercised simultaneously on certain tissues or structures and on the vital medium.

But all modification, even weak and transient of the medium, necessarily reacts on the anatomical elements which should find in this medium the necessary substances for their maintenance and their renewal, that is for their life. And this reaction will necessarily transform itself by transient or lasting modifications according to the intensity of the impregnation, the delicacy and responsiveness of the impressed anatomical element, the renewal or prolongation of the influences. These considerations permit the understanding of, among other things, the fundamental importance of the alimentary regime. It is extremely probable that these general modifications of the fixed elements of life create the morbid aptitude or confer immunity. In all cases this alteration of the physico-chemic constitution of the vital medium ought to cause a change in the activity with which the cells elaborate matter, namely, a modification more or less profound in nutrition, in succession to a variation in the proportion of immediate principles, by the diminution, the suppression, or the addition of certain substances, which necessitate a change in the composition of the blood and the juices constituting the vital medium of the cells, which bring about an alteration in the physico-chemic constitution of the anatomical elements, rendering possible in them the accumulation or the disappearance of such or such an immediate principle, determining in them the formation of abnormal substances, troubling the anatomical state of these elements and preventing the performing of their functions.

Modifications thus produced do not depend solely on the quality, the quantity, and the relative proportion of the various ingesta; they are influenced by the actions of the important organs, which elaborate, distribute and eliminate these materia's; but they are above all subordinated to the vital activity of each cell and governed by that great regulator of the organic acts—the nervous system. And we are led back to the consideration of the modifiers of nutrition as the indirect modifiers of the

nervous system, justifying the assertion to which I have already drawn your attention several times that all medicinal substances may be considered indefinitely as modifiers of the nervous system.

The quality of the metamorphoses, which the material undergoes and the activity of the nutritive mutation may be influenced in an abnormal sense in accordance with a particular disposition of the economy, answering to the old conception of Diathesis which impresses a vicious course on the manner by which these changes are accomplished. It is in all these cases specially that there would be a major interest to interfere with the evolution of the nutritive phenomena in order to bring them back to their normal course. These diatheses result sometimes from a very long subjection of the organism to conditions more or less abnormal which end by realizing a particular adaptation, producing this vicious form of evolution from the nutritive phenomena; but they are indeed more frequently congenital, because the permanent alterations of nutrition may have their principal origin in heredity or an inborn tendency. Each anatomical element, arising from the primordial cells constituted by the ovum and the spermatozoon, contain or reproduce the method of nutritive activity of these elements or their generators. This explains the difficulty that we experience in modifying as well by the means of medicinal substances as by the aid of physical agents, the nutrition, of cells of which the reactions have been firmly established for a long time in a fixed direction.

We almost always ignore the very cause of the trouble in nutrition capable of engendering the diathesis. While observation teaches us that each time that a living organism deviates from its normal functions on account of a morbid influence, it tends to return spontaneously to its normal state, in other words, to health; and one may, with Professor Panchard, consider the malady as being often only the sum total of the oscillations resulting from the antagonistic action which arises from the disturbing and the curing effect, oscillations which at last arrive at a state of equilibrium. In order that a disease which is not necessarily fatal may not go on to a cure, and consequently that it may remain chronic, it is necessary that the disturbing effort should be lasting and maintain the deviation.

In some cases, this deviation producing persistent nutritive alterations will be able to cause paroxysmal accidents, rebellion of the organism which reacts by these violent manifestations; these are then useful maladies, if one may thus speak, and which it is necessary to know and respect. But, in the majority of cases, it is important to correct this deviation from the normal nutritive phenomena, because these troubles

create a favorable medium for the development of certain germs which would not be capable of multiplying in a normal organism.

Conversely the development and multiplication of germs in a normal organism may become the cause of severe derangements in nutrition. Thus is it necessary to attack these enemies in every organ through which we suppose they may penetrate into the economy, to follow them in the blood and the tissues, to try to destroy them or at least to stop their multiplication; to forcibly remove from the liquids of the organism whatever might be necessary for their life, or to add what would be hurtful to their existence, in other words, to modify the physical state of the vital medium. In this case, the search for a parasiticide agent appropriate to each kind of germ should not cause us to neglect the organism of the patient by modifying his nutrition, in fine, by artificially producing that particular state of the fluids which creates immunity. In order to fix ideas by an example, phthisis is certainly proven to be due to germs, but these germs can only multiply readily in a body with poor nutrition, and this alteration of nutrition results from heredity, from innate conditions, from bad habits, from defective hygiene, from a physiologically debilitated function, or from previous maladies.

I hope by these few considerations to have made you seize the prime importance of the modifiers of nutrition. Their role is, indeed, quite superior to that of the remedies which we have studied previously. But the interpretation of their action is still more delicate and difficult because, in a great number of cases, the modification that they determine are brought about only by a very long lapse of time, and which experimentation is incapable of revealing by its interrupted nature. A series of changes intervene both in the vital medium and in the anatomical elements which are nourished there. Thus is it to empiricism that we owe the largest part, I would even say almost all our knowledge of therapeutic agents.

To mechanically modify the anatomical state, to change the active functions of the elements and structures, to provoke an act physiologically useful, are the desiderata these modifiers of nutrition attempt to realize, and it is here that we might apply the maxim of Schwelgue: "When it is expedient to act in a disease, it is the change which is essential." It is important to remember, that many remedies seem to produce opposite effects according to the condition in which they find the organ on which they act, as if their action is limited by putting the organ in a state contrary to that in which it was at the moment when the remedy influenced it. This observation is principally verified in the case of the modifiers of the nervous system and of nutrition.

However, in the majority of cases, though less manifest or immediately obvious to our senses, the influence exercised by the environments on the animal organism is quite as important as that exercised by the same agents on the vegetable organism. The differences, so glaring in appearance, which exist between the animal and vegetable when one considers some representatives raised high enough in each group, disappear when we consider the anatomical elements. Then we see no more constantly the products of vegetable assimilation serving for animal nutrition than that the products of animal disassimilation are used by the vegetal. What we desire to point out is that the vegetable is an agent of organization, of synthesis, of reduction, while the animal is an agent of destruction, of analysis, and of oxidation. In the presence of some anatomical elements, the oxidations and reductions are effected in both cases and after the same manner.

Now it is necessary to wait and see the physical agents play a very important role under the title of modifiers of nutrition, and we can even discover a trace of this physico-mechanic influence in the manner some medicinal substances will intervene as a means of modification. There exists, indeed, a very accentuated difference in the influence exercised by various medicinal substances. Certain bodies act chemically on the protoplasmic elements or on their elaborated products, while others act physically and their influence depends more on the number of molecules contained in the medium than on the nature of these molecules. I cite, as an example, the influence exercised by sea salt. A weak solution stimulates the fermentation of glucose in the presence of the beer leaven and promotes the absorption of an albuminous solution injected into the rectum of an animal, a solution which would not be normally absorbed, while concentrated solutions of sea salt absolutely arrest these phenomena.

The influence exercised by these physico-mechanic conditions is still very obscure and scarcely commences to appear in the interpretation of medicinal actions, but we will certainly draw from here a few of the precepts which will allow the elucidation of a great number of questions. The theory of ions, of cryoscopy, of osmotic tensions are the proofs of the part, at times preponderant, which these questions of molecular physique may claim in the unravelling of the phenomena.

By way of resumé, the modifiers of nutrition represent par excellence the type of those remedies named by Fonssagrives, biocracies, that is to say, permitting of the creation, in some way, of a special form of health, a particular physiology, only temporary, and profiting by the favorable solution of maladies when it is stirred up in an opportune manner. These are the remedies of which Hertz has defined the effect in the following way, "To dominate the physiology of a malady by that of the remedy."

The agents of that medication are the modifiers of functions or organs to the aid of which they are directed by raising, lowering or regulating the rhythm of their activity. Thus we are led to establish two large groups—stimulants, and depressers—although the distinction may not be, in reality, quite as marked as this subdivision would lead one to think.

The action of a stimulant may be directly, or indirectly exercised: directly in rendering more perfect the interstitial elaborations from which the cellular work results characteristic of each organ tissue or cell; or, indeed, by bringing with greater abundance and after a better choice the elements of reparation. Such is the role of alimentary tonics, or analeptics, employed solely or concurrently with medicinal tonics. Analeptics are the agents which restore by nutrition the materials which are lacking in the blood, so that it may accomplish its work in a regular way. Under this heading, sodium chloride, iron, manganese, oxygen, phosphate of calcium are aliments, or, at least, constitute terms the vital medium more fertile, and which increase in consequence the multiplication like those which are considered as stimulants of histogenesis and favor the perfection of the finest acts of nutrition.

The mode of action of these substances is as complex. They may act directly on the cells or through the medium of the trophic nerves; they may intervene by provoking the exaggeration or diminution of the functional activity of the organ or tissue. Pushing the argument further in this direction, we find that it even leads us to still consider as indirect modifiers of nutrition, certain special or functional stimulants capable of exciting the sensitive activities of transition between the aliments and medicaments, because they may be considered, according to circumstances, either as alimentary substances destined for the renovation of anatomical elements and the fluids, or as medicinal substances intervening under the head of modifiers. On the other hand, all aliments which are energetic restorers in small volume form part of this group of analeptics.

Thus one may fix the passage, by insensible gradations, from the reconstructing agents which increase the activity of cellular formation, either by depositing some of the more useful alimentary material, or by a kind of augmentation of the cell appetite, to those which render the conflict between the cell and of the secretory organs, such as the diuretics, cholagogues and galactagogues.

As to agents of depression, they are represented by alterants or attenuants, remedies capable of exaggerating the movement of disassimilation or indeed of abating the activity of cellular formation according to a special action quite independent of a hypersecretory action, on the side

of which it is necessary to place the indirect depressers, provoking exaggerated organic expenditures either by hypersecretions, or by excessive cellular activity.

TABLE OF THE MODIFIERS OF NUTRITION.

Stimulants of general nutrition.....	{ Alimentary tonics (restorative analeptics) ... { Medicinal tonics (trophic stimulants)	{ Analeptics (proteid, fat, sugar, feculents, gelatinous gum.) { Bitter aperients, chloride of sodium, sodic chlorine water, phosphate of lime.
Stimulants of special nutrition.....	{ Physical agents : gymnastics, massage, percussion, faradization. { Douches : saline, sulphurous, aromatics, etc. { Phosphorus and arsenic.	
Depressors of general and special nutrition	{ Weakening diets, alterants properly and directly named : phosphorus, arsenic, iodides, acids, mercurials, alkalines. { Indirect attenuants : hypercrinical, purgatives.	
Agents indirectly contributing to the modification of nutrition.....	{ Antiseptics, parasitocides.	

As usual, in pharmacology, these subdivisions are indeed far away from presenting that exactness which one would like when dealing with a classification. They ought to be considered only as a didactic means, an artifice permitting arrangement in order to facilitate study. Some agents are capable of producing in the organism modifications often very different according to opportunity or the mode of their use.

THE HOME IN ITS RELATION TO THE TUBERCULOSIS PROBLEM.*

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I.

In its most important aspects the problem of tuberculosis is a home problem. In an immense proportion of all cases the scene of the drama is the home; on its stage the acts are played, whether to the happy issue of a recovery, or to the dark ending of a tragedy, so commonplace as to have dulled our appreciation of its magnitude. In more than four hundred homes of this country there are lamentations and woe to-night; husbands for their wives, wives for their husbands, parents for their children, children for their parents. A mere repetition of yesterday's calamities! and if the ears of your hearts are opened you can hear, as I

*From the Report of the Henry Phipps Institute for the Study of Tuberculosis.

speak, the beating of the wings of the angels of death hastening to the four hundred, appointed for to-morrow. That this appalling sacrifice of life is in large part unnecessary, that it can be diminished, that there is hope even for the poor consumptive—this represents a revulsion of feeling from an attitude of oriental fatalism which is a triumph of modern medicine. Our French brethren have made the present position of the question possible. Laenec, the father of modern clinical medicine, gave us the pathology of the disease—and much more. When Galen, Frascatorius, Morton, and others believed strongly in the contagiousness of phthisis, it remained for Villemin to demonstrate its infectiveness by a series of brilliant experiments which made Koch's work inevitable; while to Verneuil, Chauveau, Nocard, Brouardel, and others we owe the initiation of those local and international congresses which have done so much to rend the veil of familiarity, and to educate the public and the profession to a point at which scientific knowledge has become effective. It seems a law that all great truths have to pass through a definite evolution before they reach a stage of practical utility. First the pioneers, seeing as through a glass darkly, groped blindly for the truth, but worked so effectually that by the seventh decade of the nineteenth century we had a clear pathology of tuberculosis and an accurate symptomatology; while in each generation a man had not been wanting who, like Sydenham, or George Bodington, appreciated the essentials of treatment, as we recognize them to-day. Then Villemin and Koch demonstrated the truth of the infectivity of the disease and the presence of a specific germ. Watchers on the towers, like the late Austin Flint, a lifelong student of the disease, welcomed the announcement as the much-wished-for fulfilment of a prophecy; but, as Plato shrewdly remarks, we are not all awake when the dawn appears, and many in this audience, like myself, had to see the truth grow to acceptance with the generation in which it was announced. It is a horrible thought, but very true, that we reach a stage in life, some earlier, some later, in which a new truth, a perfectly obvious truth, cannot be accepted; and the work of Villemin and of Koch fared no whit better with the seniles and the pre-seniles of the seventh and eighth decades of the last century than did Harvey's immortal discovery in his day, or for the matter of that, did Lister's great work. And now we are in the third or final stage, in which the truth is becoming an effective weapon in the hands of the profession and of the public. The present crusade against tuberculosis, which is destined to achieve results we little dream of, has three specific objects: first, educational—the instruction of the profession and the instruction of the people; second, preventive—the promotion of measures which will check the progress of the disease in the community; third, curative—the study of methods by which the progress of the disease

in individuals may be arrested or healed. The three are of equal importance, and the first and the second closely related and interdependent. The educational aspects of the problem are fundamental. Nothing can be done without the intelligent coöperation of the general practitioners and of the community, and it is a wise action on the part of the Phipps Institute to take up actively this part of the work, and to spread a sound knowledge by lecture courses and by publications. It is not too much to say that could we get on the part of the doctors throughout the country an early recognition of the cases, with a practical conviction of the necessity of certain urgent and obvious measures, and on the part of the public attention to hygienic laws of the most elementary sort—could we in this way get the truth we know into the stage of practical efficiency, the problem would be in sight of solution.

Of late years there have been done in this country three pieces of work relating to tuberculosis of the first rank—that of Trudeau in the Adirondacks, enforcing on our minds the importance of the sanatorium treatment of early cases; that of Biggs and his associates in the New York Board of Health in demonstrating how much can be done by an efficient organization; and, thirdly, the work of Lawrence F. Flick, the Director of the Phipps Institute, in demonstrating by a long and laborious research the dangers of the house in the propagation of the disease. In casting about for a subject it seemed to me most appropriate to discuss those aspects of the problem which concern the home in its relations to the disease, since after all the battlefield of tuberculosis is not in the hospitals or in the sanatoria, but in the homes, where practically the disease is born and bred.

II.

The germ of tuberculosis is ubiquitous; few reach maturity without infection; none reach old age without a focus somewhere. This is no new opinion. Gideon Harvey, in his "*Morbus Anglicus*" (1672, 2d ed.), says: "It's a great chance we find, to arrive to one's grave in this English climate, without a smack of a consumption, Death's direct door to most hard students, divines, physicians, philosophers, deep lovers, zealots in religion," which is the English equivalent of the German popular saying, "*Jedermann hat am Ende ein bischen Tuberculose.*" This may seem an exaggerated statement, but the records of Naegeli demonstrate its truth. After all, it is only from the post-mortem table that we can get a true statement of the frequency of tuberculosis in the community. It has long been known that a very considerable percentage of persons not dying from consumption have the lesions of tuberculosis. The records have ranged in different series from 7.5 per cent. (Osler), to 38.8 per cent. (Harris). But these studies were not made directly with a view of deter-

mining the presence of tuberculosis. They were the ordinary, everyday observations of the post-mortem room. The only series which we have dealing with this question in a satisfactory way is the study of five hundred post-mortems in Prof. Ribbert's Institute in Zurich, by Naegeli. It is to be borne in mind that in his work special examination was made of every organ of the body, sections were made of all parts with the greatest care, and the individual lymph glands particularly inspected. Tuberculous lesions were found in 97 per cent. of the bodies of adults.* He gives a very interesting curve showing the incidence at different ages. Up to the fifteenth year there was only 50 per cent. then there was a sudden rise in the eighteenth year to 96 per cent. with a slow rise, so that by the fortieth year a tuberculous focus was found in everybody. This careful research demonstrates the extraordinary susceptibility in man to tuberculous infection, and an equally extraordinary degree of resistance. In the tuberculin experiments of Franz on healthy Austrian soldiers a reaction was shown in over 60 per cent. so that we must accept the conclusion that tuberculous infection, latent tuberculosís, is much more extensive than is the manifest disease.

One interesting point is that we are never left long in peaceful possession of a satisfactory belief about the modes of infection in tuberculosis. No sooner had the pool got quiet and we had settled into a comfortable conviction of the unity of human and bovine tuberculosis, than Koch stepped in and troubled the waters with his views on their dual nature; and now, just as the commotion was subsiding, von Behring stirs the waters by referring all tuberculosis to the milk-jug. But none of these investigations has diminished the importance of the home as the chief source of infection, the place in which the conditions favoring contamination are most common, particularly among the poor. Nor do I think that we can give up the view of aerial convection and of primary inhalation infection in a large proportion of the cases. Figures are, of course, tricky playthings, but it does seem that the overwhelming evidence of the prevalence of bronchial and pulmonary tuberculosis in children is in favor of the older views. After all, how rare is intestinal tuberculosis as a primary lesion! and if, as von Behring supposes, there is a special vulnerability of the bowels in childhood, we should expect a much larger number of cases. It is quite possible, as he has shown, and as Ravenel has demonstrated, that the bronchial and cervical lymph glands may be the first attacked in an animal infected through the intestines; yet the incidence in childhood of respiratory disease is so large, and the incidence of intestinal lesions is so small, that it counts strongly against von Behring's new views. In fact, primary intestinal tuberculosis is extraordinarily

*"Virchow's Archiv," Bd. CLX, page 426.

rare. Koch states that there have only been ten cases in ten years at the Charité Hospital, Berlin, and of thirty-one hundred and four instances of tuberculosis in children there were, according to Biedert, only sixteen cases, while in adults primary intestinal tuberculosis occurred in but one instance in one thousand autopsies at the Munich Pathological Institute. In this country the studies of Bovaird in New York and of Hand in Philadelphia speak strongly in favor of air-borne infection in the large majority of cases in children. There is a special liability of the milk to become contaminated by the dust in uncleanly streets and in dirty houses, and upon this mode of infection von Behring lays great stress, and in infancy, either in this way or from the milk of tuberculous cows, he thinks the majority of persons become infected. Apparently he does not adopt Beaumgarten's view of the latency of the germ itself, but of the latency of small foci of disease acquired in childhood, which only develop into active tuberculosis under favorable circumstances. It may be well to quote his own words in this connection, as his views are of importance: "I am well acquainted with the statistical arguments based on the higher returns of infection and mortality from consumption amongst attendants on the sick residents in houses occupied by people known to be phthisical, and inmates of prisons, which are intended to demonstrate the origin of pulmonary phthisis from the inhalation of particles of dust, or moisture containing tubercle bacilli. But in view of the extensive dissemination of tuberculosis above described amongst the human race, there is ample justification for the objection that in cases of this kind, where persons succumb to pulmonary phthisis, tuberculous foci pre-exist in their lungs, and that these pulmonary lesions already present developed into active consumption, owing to the adoption by those persons of a mode of life favoring tuberculosis." ("British Medical Journal," translation, Oct. 17, 1903.)

We need a systematic inspection, according to Naegeli's method, of the bodies of children dead of acute diseases, so as to get, if possible, the true incidence of infection in them. Councilmen and others have shown how frequently tuberculosis is present in the bodies of young children dead of diphtheria, but the statistics at our disposal certainly do not bear out this view of von Behring, which would lead us to suppose that infection was largely a matter of childhood. Naegeli's figures on this point are interesting, though he only had eighty-eight autopsies on children. Still his results are of value, as the inspections were made with such very special care. Of these eighty-eight children there were only fifteen with tuberculous lesions. In ten of these the tuberculosis ran a fatal course; in four there were advanced lesions which did not cause death, and in only one was there a definitely healed lesion.

Sown broadcast as they are in our modern life, it is evident that few people reach maturity without harboring the seeds of tuberculosis. That we do not all die of the disease is owing to the resistance of the tissues; in other words, to an unfavorable, *i.e.*, the rocky soil on which the seeds have fallen. The parable of the sower sets forth in an admirable way the story of the disease. Since I used it in 1892, the illustration has become hackneyed, but in a semi-popular lecture I may be permitted to employ it again. The seed that falls by the wayside are the bacilli that reach our great highways, the air passages and intestines, in which they are picked up by the phagocytes, representing the birds of the air, or they are trodden under foot by the swarms of contending organisms. The seed that falls on stony places is that which reaches the lymph-nodes of the bronchi and mesentery, and though it springs up and flourishes for a while, there is no depth of earth, and, lacking moisture, it withers away into cretaceous healing. And that which falls among thorns represents the bacilli which effect a lodgment in the lungs, the kidneys or elsewhere, where they thrive and grow and produce extensive changes, but the thorns—the equivalent of the cares of this world and the deceitfulness of riches, in the parable—grow up also, and in the form of delimiting inflammatory processes and of contracting fibrosis, choke the seed, and recovery ultimately takes place. But falling on good ground, the seed springs up, increases and brings forth fruit some thirty, some sixty and some a hundredfold, which may be taken to represent the cases of chronic, subacute, and acute tuberculosis. We are beginning to appreciate that the care of the soil is quite as important as the care of the seed. We cannot repeat Trudeau's remarkable environment experience in our cities, but we learn a practical lesson of the influence of fresh air, open spaces, and sunlight upon infected individuals. Much has already been done in this direction, and the reduction of the mortality from tuberculosis which has been going on for the past twenty-five years has been in great part due to improved sanitation. We have only made a beginning, but to know the enemy in this case, to know that his strength lies in the homes of the poor, is more than half the battle.

Let us look at the conditions confronting us in one of the large eastern cities. Like Philadelphia, Baltimore is fortunate in the absence of big tenement houses, but, like it, too, it has the disadvantage of a large number of very narrow streets and alleys. There is no drainage system, the sewerage is collected into cesspools, while the surface water and the water from the kitchens run off on surface drains. There is a very large foreign population and a large number of colored people. While tuberculosis is a very common disease, I do not think the mortality in Baltimore is specially high. In the report of the Board of Health for the year

1901 there were twelve hundred and seventy-four deaths from the disease in a total mortality of ten thousand four hundred and seventy-nine, about 12 per cent.

Four years ago two ladies, interested in the disease, gave me a sum of money to use in connection with our work at the Johns Hopkins Hospital. We do not take many cases of tuberculosis into the wards. Last year there were only fifty-three. They come chiefly for the purpose of diagnosis, and we often admit patients from outside the city on purpose to teach them, for a period of a week or ten days, just how to regulate their lives. It seemed best to try to do something for our consumptive out-patients, of whom we have an average of about two hundred new cases in the year. It seemed to me that a good and useful work could be done by the personal visits of an intelligent woman to the houses of these patients, that she might show them exactly how to carry out the directions of the physician and give them instructions as to the care of the sputum, the preparation of food, and when necessary to report to the Charity Organization as to the need of special diet, or to the Health Board when the surroundings were specially unsanitary. In connection with this an inspection has been made of the condition under which these people live. Of the seven hundred and twenty-six cases, five hundred and forty-five were whites, and one hundred and eighty-one blacks. Among the whites were fifty-three Russian Jews. There were four hundred and ninety-two males, two hundred and thirty-four females. The analysis of the reports of Miss Dutcher, Miss Blauvelt, and Miss Rosencrantz during the past four years is briefly as follows :

	Russian.	Colored.	White.
Bad sanitary location	62%	53%	16%
Insufficient light and ventilation.....	71%	65%	36%
Overcrowding	61%	41%	32%
Personal and household uncleanness...	70%	56%	30%

The white population in a large majority of the cases was distributed irregularly throughout the city, but a large proportion live in good locations, many even on new streets in the suburbs. A small percentage, about twenty, live in a bad neighborhood, where the houses are close together and hemmed in in narrow alleys and courts. This region lies chiefly to the south and west of the hospital, toward the harbor. In about a third of these people the personal and household cleanliness is fairly good. The colored people make up about a fourth of the cases. They live in much more unfavorable localities, chiefly in narrow, thickly populated and dirty alleys in small, two-story houses, usually old, and the windows often limited to the front—houses in which proper lighting and ventilation are impossible. One important feature in the colored population is the desire always to occupy their own houses, so that there

is comparatively little overcrowding. The Russian Jews form about one-fourteenth of the total number of patients. They live in a neighborhood that was at one time inhabited by the wealthier classes and the houses have now been converted into tenements. The streets are in many cases wide and clean and sunny. The percentage of overcrowding in the rooms is high. Very often a family of seven or eight is round in two rooms. The contrast in the matter of personal and household cleanliness between the Russians and the other whites is most striking. It is exceptional to find the former in a condition, either in person or house, that could be termed in any way cleanly. A very serious thing is the frequency with which the patients move from one place to another. The seven hundred and twenty-six patients had during their illnesses occupied nine hundred and thirty-five houses. Last year the percentage of removals was still higher. The one hundred and eighty-three patients had occupied three hundred and seventy-nine houses. Another important point brought out was the fact that fully 66 per cent of the patients visited did not sleep alone.

Amid such sanitary surroundings the patient can scarcely avoid contaminating the house in which he lives, while, perhaps more important still, the environment, combined with insufficient food, etc., lowers the resistance of the other members of the family and renders them more liable to active disease.

How are we to combat these conditions? *First*, by an educational health campaign in the homes. The young women who have been engaged in this work in Baltimore have frequently reported to me the readiness with which their suggestions have been accepted, particularly in regard to the care of the sputum. To be successful such a campaign must be carried out by the Board of Health, and a staff of trained visitors, women preferably, should do the work. To carry this out effectually there should be, *secondly*, in all cities a compulsory notification of cases. The plan has worked most successfully in New York, and it should be everywhere followed. There are no difficulties which cannot be readily surmounted, and there need be no hardships. *Thirdly*, in most cities the powers of the Health Boards should be greatly enlarged, so as to deal efficiently with the question of proper disinfection of the houses occupied by tuberculous patients. *Fourthly*, the question of the housing of the poor needs attention, particularly in the matter of proper control of tenements, and the regulation, by law, of the number of persons in each house. *Fifthly*, by placing upon the landlord the responsibility of providing, under the control of the Board of Health, a clean, wholesome house for a new tenant. *Sixthly*, the wholesale condemnation of unsanitary streets and blocks, and the rebuilding by the municipality, as has been done in

Glasgow and elsewhere. We cannot make people cleanly or virtuous by act of the legislature; at the same time we cannot leave important sanitary details in the hands of irresponsible persons whose view of life is limited to returns and rentals. The extraordinary reduction in the mortality from consumption in the large cities is due directly to an improvement in environment. That much more remains to be done in the way of betterment the facts I have presented fully show.

III.

And then we have to face the all-important fact that at present an immense majority of all tuberculous patients have to be treated at home. Probably not 2 per cent. of the cases can take advantage of sanatorium or climatic treatment. What has the new knowledge to say to the 98 per cent. which is debarred from the enjoyment of these two great *adjutores vitæ*? Very much! Read aright, a message of hope to many. Just as we have learned that climate in itself is not the prime essential, but a method of life in any clime, so we have found that even under the most unfavorable surroundings many cases recover in town and country, if rigid system and routine are enforced. But "Hope, that comes to all," as the poet sings, comes not to the large proportion of the unhappy victims in our overgrown and crowded cities. What but feelings of despair can fill the mind in the contemplation of facts such as I have laid before you in the analysis of our inspection in Baltimore? So numerous are the patients that private beneficence shrinks at a task, which the city and State authorities have not yet mustered courage to attack, except in one or two places. Hospital care for advanced cases, sanatorium treatment for incipient cases, can only be provided by an enormous expenditure, but we must not be discouraged, and the good work begun in Massachusetts, New York, and in this State will grow and prosper. After all, the campaign in which we are engaged is one of education; only let us not forget that teaching has not all been on the side of the profession. We have all been at school during the past quarter of a century, and at school we must remain, at once teachers and pupils, if we are to make the knowledge we possess effective. We are not living in Utopia, and in the matter of sanitation the man on the street is a blundering, helpless creature whose lessons are put bodily into him at a heavy cost of life and health. You know this story only too well in Philadelphia. To provide accommodation for all consumptives is impossible, but it is not unreasonable to look forward to the day when every large city will have a sanatorium for the treatment of the early cases, situated not far from its outskirts, with all the equipment for open-air treatment. Let there be some place at least where a poor workingman or workingwoman may

take a chance for life. Now, as we doctors know only too well, hundreds are sacrificed in whom the disease could have been arrested. The hospital care of the very sick should be provided for in special wards of the city hospitals. To give the best of care to these unhappy victims is a true charity to them; to place them where they cease to be a danger to the general health is a true charity to others.

In the warfare against tuberculosis the man behind the gun is the general practitioner. The battle cannot be won unless he takes an active, aggressive, accurate part. That he is not always alert must be attributed in part to the carelessness which a routine life readily engenders, and partly to a failure to grasp the situation in individual cases. The two points to be impressed upon him are first, *that early recognition of the disease can only come from better methods of practice and greater attention to the art of diagnosis.* The insidiousness of the onset, the protean modes of advance, and the masked features of even serious cases should never be forgotten. As Garth so well puts it in his dispensary (1699):

“ Whilst meagre *Phthisis* gives a silent blow ;
Her *strokes* are sure ; but her advances slow.
No loud alarms, nor fierce assaults are shown,
She starves the *fortress* first, then takes the *town*.”

Too often precious time is wasted and the golden opportunity is lost by the failure of the physician to make a thorough examination of the chest. I am every day impressed with the necessity of more rigid, routine examination, even of the “ordinary case.” In illustration of the carelessness which is so readily acquiesced in, let me mention a patient who was brought to me only a few weeks ago, supposed to have a protracted fever after typhoid. Her father a physician, her husband a physician, and it is scarcely credible that neither of them had the faintest idea that the poor soul had advanced consumption, though it had reached a stage in which there was shrinkage of one side of the chest, and the diagnosis could almost be made by inspection alone. The carelessness is a sort of mental inadvertence, to which even the best of us at times seem liable. A very distinguished and careful physician brought his daughter to me a few years ago to have her blood examined, as he felt sure she had a chronic malaria. She had little or no cough, but an afternoon rise of temperature, and it turned out to be the usual story—quite pronounced local disease at her left apex. There had not been a suspicion on the part of her father or of the family.

On the other hand, we must be careful not to diagnose tuberculosis too readily. The physicians of our sanatoria have a good many tales to tell in this matter.

The second point is the *necessity for a more masterful management of the early cases*. Here comes in that personal equation so important in practice, and which has such a vital bearing in the prognosis of the disease. The dead hand of the Arabian still presses sore upon our practice, and precious weeks are too often lost in trusting to a poly-pharmacy which in some instances would make the heart of Avicenna or Averroes to rejoice. It may seem hard to say so, but my firm conviction is that more tuberculosis patients are injured than helped by drugs. We have not yet come to the belief—to the practical belief, at any rate—that the disease is not to be *treated* by them. After so much has been written and spoken one would suppose that the essential features of the treatment of the disease were generally recognized, but the practical experience of any man who sees a great deal of tuberculosis is directly to the contrary. It is not so much that the drugs do harm *per se*, but that weeks of priceless value are lost in trying to check a cough and quiet a fever in a patient who is allowed to continue his work and is up and about. I cannot agree with a recent writer who says that the tendency at present is rather to make too little than too much of medicinal treatment. Perhaps in advanced cases we are more sparing, but in early stages I *know* that we are still leaning on the Egyptian reed in which our fathers trusted, and trusted in vain. Year by year I see only too many instances in which the mental attitude of the physician toward the disease clearly indicates that the idea of an efficient home treatment by fresh air had never been entertained. What I would like to plead for most earnestly is this home treatment of early cases by modern methods. I am not addressing myself now to city physicians. But I would appeal to the practitioners in the country and in the smaller towns and in the suburbs, where the conditions are so much more favorable. I have been much interested for several years past in a group of cases scattered all over the country, usually in the farmer or mechanic class, in which I have supervised with the physician a home treatment, often with striking success. The remarkable case which I reported in 1900 gave me great encouragement, as the complete arrest of the disease was accomplished under the most primitive surroundings by the persistence and devotion of the patient herself, who richly deserves the good health she enjoys to-day. There have been disappointments; all cases are not suitable, all cases are not curable, and it is not easy to say which ones are likely to do well. The most favorable looking patient with a small patch at one apex may have a progressive disease and die in the best of surroundings, while a case with high fever, sweats and an extensive lesion may improve rapidly. On November 24, a fine, stalwart fellow came to see me, in whom I did not recognize the *poitrinaire* of September 28, carrying his diagnosis in his face. The sun-

shine and open air of a Maryland village had been enough, enough, at any rate, to put him on the high road.

Let me mention in a few words the essentials in this home treatment of consumption in the small towns, country places and the suburbs of our large cities. *First*, the confidence of the patient, since confidence breeds hope; *secondly*, a masterful management on the part of the doctor; *thirdly*, persistence—benefit is usually a matter of months, complete arrest a matter of years, absolute cure a matter of many years; *fourthly*, sunshine by day, fresh air night and day; *fifthly*, rest while there is fever *sixthly*, breadstuffs and milk, meat and eggs.

Let us not forget that it was a country practitioner, George Bodington, of the little town of Sutton Coldfields, in Warwickshire, who, in 1840, revived the open-air treatment of tuberculosis. "To live in and breathe freely the open air, without being deterred by the wind or weather, is one important and essential remedy in arresting its progress—one about which there appears to have generally prevailed a groundless alarm lest the consumptive should take cold." And he gives a number of cases showing the good effects of the open-air treatment. He seems to have carried it out on the plan which was strongly advocated by Sydenham, which was a combination of open air and riding or carriage exercise. There are few things more striking in the writings of Sydenham than the insistence with which he states that consumption is curable. It is worth quoting a paragraph which I take from Locke's "Anecdota Sydenhamiana," as it is put in a more striking way than in his general work. "I am sure that if any physician had a remedy for the cure of a phthisis of equal force with this of riding he might easily get what wealth he pleased: In a word, I have put very many upon this exercise in order to the cure of consumptions, and I can truly say I have missed the cure of very few; in so much that I think how fatal soever this disease be above all others, and how common soever; (for almost two-thirds that die of chronical diseases die of a phthisis), yet it is this way more certainly cured than most diseases of less moment: Provided always that this travelling be long persisted in according to the age of the patient, and length of the disease. . . . Women or very weak men that cannot ride on horseback may ride in a coach and yet attain the same end, as I have seen by often experience." In reality this practice of Sydenham never died out, but it was in practice in New England in the early days and throughout the eighteenth century. The late Henry I. Bowditch, who did so much to further the study of tuberculosis in this country, states that he followed it in his own case.

Let me conclude with a quotation from De Quincey, which puts in graphic language the question which so many generations have asked,

and asked in vain, but which we have been permitted to answer in part at any rate, and to answer in hope. "If you walk through a forest at certain seasons, you will see what is called a *blaze* of white paint upon certain *élite* of the trees marked out by the forester as ripe for the axe. Such a blaze, if the shadowy world could reveal its futurities, would be seen everywhere distributing its secret badges of cognizance amongst our youthful men and women. Of those that, in the expression of Pericles, constitute the vernal section of our population, what a multitudinous crowd would be seen to wear upon their foreheads the same sad ghastly blaze, or some equivalent symbol of dedication to an early grave. How appalling in its amount in this annual slaughter among those that should by birthright be specially the children of hope, and levied impartially from every rank of society! Is the income-tax or the poor-rate, faithful as each is to its regulating time-tables, paid by *any* class with as much punctuality as this premature *florilegium*, this gathering and rendering up of blighted blossoms by *all* classes? Then comes the startling question that pierces the breaking hearts of so many thousand afflicted relatives: 'Is there no remedy? Is there no palliation of the evil?' It is one of the greatest triumphs of scientific medicine to be able to reply, Yes, the evil may be palliated and is rapidly being lessened, and for many at least, a remedy has been found."

GOITRE IN A NEW-BORN CHILD.

By W. T. BURNS, B.A., M.B., Toronto.

The day after its birth, the child, a female, became very cyanosed, the breathing being extremely labored. This lasted for several minutes, when, gradually, the breathing became more easy and the child regained the normal color. It was at this time that I noticed the enlargement on the neck which I took to be a goitre. It was very pronounced, the tumor showing on both sides and in front of the trachea.

These attacks of dyspnoea and cyanosis occurred frequently for the next few days. On the sixth day, the child was free from them and I noticed a distinct diminution of the size of the tumor. On the ninth day, the child died.

The autopsy showed a greatly enlarged thyroid gland of a consistency which was nearly fibrous. On each lobe were several cysts full of a clear fluid; and, on the left one, the remains of a large cyst which had ruptured. The rupture of this cyst was probably the cause of the decrease in size of the tumor, remarked on the sixth day.

The gland was placed high up, being near the hyoid bone, and was closely adherent to the trachea.

EYE-STRAIN FROM THE PHYSICIANS' POINT OF VIEW.*

By G. H. BURNHAM, M.D., O.M.

Professor of Ophthalmology, University of Toronto.

THE first question naturally asked is, what is eye-strain?

Eye-strain is a condition of the eye owing to its faulty shape which causes it to make more than the natural or physiological efforts to focus any object, that is, to get a clear view of an object. This peculiarity of shape is not visible to an observer; though, perhaps, there are certain peculiar appearances, which may arouse the suspicion of an expert.

This condition may be present and give rise to no symptoms of eye-strain whatsoever. That is, a condition of irregularity of shape and focusing power may exist and still the person be quite free from any symptoms. This is quite often the case. When this state is accidentally found out, it is my usual rule to let the eyes alone, that is, not to give glasses. However, with this latitude, always explain to the person its presence, and the fact that if a certain train of symptoms arise this condition is probably the cause.

Eye-strain does give rise to so many nerve storms that to any member of the profession, save the expert, it savors of exaggeration. We oculists deny this, and assert, on the contrary, that we ourselves are often astonished at the unexpected benefit which arises from the relief of eye-strain. Many examples can be given of the wonderful healing power of the correction of eye-strain.

It is, of course, now allowed by the profession that a prolific cause of headache is eye-strain. This fact, however, had to be again and again insisted upon and demonstrated before the general profession would even entertain it.

Nervous diseases, before eye-strain was regarded as of any importance, were diagnosed and prognosed in very many cases as being associated with marked structural changes. No one was so certain that these conclusions were correct as the pathologist. I wish to say that the dogmatism of the pathologist, as to what conditions of the nervous system, as evidenced by symptoms during life, could be cured or remedied or was beyond aid, was based upon his interpretation of tissue changes, as seen after death, and has been responsible for many a gloomy prognosis which should not have been given.

As a student, I worked under Dr. Hughlings Jackson, a clinical observer who, in acuteness and accuracy of observation, was unrivalled. Then we, I well remember, looked upon many phases of abnormal states of the nervous system as due to structural changes, incurable, or almost so, which we now know were only due to the teasing of the nerve centres.

* Read at the Toronto Medical Society, 16th February, 1905.

by improper activities of other organs. No organ has been so prolific a cause as the eye.

There is a type of nervous depression which consists of a general weakness of the nervous system, only temporarily lessened by internal remedies, which is due to eye-strain. In this type the patients disclaimed any such connection, for as they say, which is true, I see well with the eyes, have no headaches, have no complaint of any kind to make of the eyes. I simply complain of a general weariness and languor. This is a type in which eye-strain is a marked factor, though it is so insidious as often to escape notice.

In these cases, eye-strain is not always the cause or even sometimes one of them; but a careful examination can always demonstrate whether it be or not.

That certain varieties of epilepsy have been stopped and permanently so by correcting the eye-strain, is now an acknowledged fact.

The range of this class of cases is limited and is not as far reaching as some have thought. Disorders of the stomach and bowels, as inability properly to digest food, severe attacks of pain in the stomach, vomiting associated or unassociated with headaches, are also its offspring. Several years ago I had a business transaction with a man who was so peculiarly irritable that I was on the point of speaking to him about his want of ordinary decent manners. However, I did not; for, on observing this man he seemed to me to have a very irritable nervous system. He was apparently a thoroughly healthy man. Three years later this same man saw me professionally. He said I have been suffering for years from indigestion, pain in my stomach, vomiting, headaches and am now so bad that something must be done. I have come to consult you as an oculist. Physicians have not been able to help me. I come of my own accord and not at their suggestion, for they have never mentioned such a thing. Even now I do not think it is my eyes, as my sight is so good. He said often the attacks were so severe that he had to remain at home one or two days each week. I tested his sight and found an error of refraction with weak ocular muscles. I gave him glasses and then proper exercises for the eyes, with the result that he has now been quite free from any such attacks for nine months.

A man several years ago consulted me, suffering so acutely from pain in his left eye and side of head that hypodermic injections of morphine had to be given. The right eye, he said, had been about blind for years, and that previous to this his right eye and side of head had ached as the left was now doing. Consequently he was very anxious. I found the right eye with a normal fundus. With proper glasses the vision was normal. The left eye with proper glasses gave normal vision. With the constant

wearing of the proper glasses for distance and reading all symptoms went away, and he is well up to this day.

The eyes with normal vision, or even that in excess of normal, may and, as a rule, do suffer the most from eye-strain. The reason is that these eyes can, by exertion, focus so as to see clearly and, consequently, they always make this exertion. However, from these eyes very severe and, even the most severe, nerve storms may arise; for this continued abnormal exertion so irritates the nervous centres that they cannot finally bear the strain.

In these cases, it is especially difficult to give glasses accurately, as there are such irritation of the retina and weakness and spasm of the eye muscles. I mean that it is quite easy to give the eyes good vision with glasses; but it is very difficult to get the eyes to take the proper glasses.

The so-called opticians have sprung into existence purely as the result of commercial greed and, as a class, are doing much harm.

The maker and seller of spectacles inaugurated the following scheme to line their pockets. This will exemplify one of the evils of allowing the commercial world to exploit medicine in order to get the public's money. The formation of the so-called schools in which men could be trained to give glasses was begun. The course was of two to three weeks duration. At the end, a diploma was given saying, the one herein mentioned is in every way capable to give glasses for every variety of eye-strain. The poor owner of the certificate, or dupe, I should like to call him, believed it, I suppose.

Then the companies sold to each graduate, or optician, or doctor of refraction, a set of trial lenses and a quantity of spectacles and, moreover, arranged to fill any orders for glasses that were sent in. In this way came the profit, and a big one it has turned out to be. At first, in fact, it is still the same, there came from every corner of the country bakers, shoemakers, grocers, druggists, jewellers, etc., to take this highly advertised and money making course. They returned home, hung up their diplomas, and went to work. Thus do these people, ignorant of any knowledge of the eye, in three weeks audaciously claim to have learned to be able to practise properly one of the most difficult branches of ophthalmology.

They do not hesitate to prescribe glasses for every eye no matter how poor the vision or how little improvement they may be able to make.

Of course, any form of disease of the eye may be present and of that they are unaware, and give no thought to unless it be glaring. Some of these so-called opticians are too ignorant to be able to gauge their own ignorance and, hence, go on. Others again are heedless and deal out glasses with about as much care as sugar or tea. Others again are out and out fakirs.

I now do accuse the general profession of being culpably ignorant and thoughtless in this grave matter. They constantly send their patients, suffering from the effects of eye-strain to one of these so-called opticians. Some of them do more. They send them to fakirs, and aye, even worse, do employ full-fledged fakirs to attend to these patients, at their patient's houses, or in their own hospitals. This support the opticians fully publish and through it they are able to still any question of the public. This support they again use as a lever to exalt their own importance and standing.

One of the offices of the general physician is to tell his clients when it is necessary for them to consult a specialist.

The practice of this duty does not loosen their hold on their clients; it strengthens it. The right minded specialist gladly commends them for it. How much more pleasant it is to say, your physician did quite right to send you to me, than to have the patient say, when the whole case is brought out so that he himself can see, why did not my physician suggest this to me, or why did not my physician send me to an oculist? When physicians thus patronize irregulars how can they rightly demur to druggists prescribing for the ills of people? For these irregulars, as opticians undoubtedly are, though some will honestly deny it, merely dabble with the eye, treating it as if it were a piece of machinery and not liable to all kinds of serious affections to which often the eye, viewed externally, gives no, or very slight, clue.

Oculists, when a case is brought to them, suffering from eye-strain and when it is proved that marked errors of refraction are present, test with great care. The more the oculists know or have had to do with these cases, the greater is the care they take. If the glasses do not give relief, they do not say the symptoms are not due to the eyes, as I have given glasses more than once. On the contrary, so difficult to manage are eyes so affected that we again test and work for some still hidden error. For an eye, racked by long overstrain, will not at first give up its secrets. After the rest from the glasses which have been properly given, a quieting of the eye is brought about and then we can get further into its peculiarities.

We test with all the means at our command, for we realize that the missing of some hidden error may mean unrelieved misery. One curse and a rapidly expanding one is the efforts of men to prostitute, to commercial gain, the discoveries made in medicine. It is a biting comment on our boasted care for the individual that we allow patent medicines to be so shamelessly brought to the notice of the public. So little cares the State that it does not even inquire into their ingredients. Under the guise of patent medicines, a great quantity of vile spirits are sold.

Our duty being to prevent the continuation of everything prejudicial to health, as well as to cure disease, must always make us a foe to all

these schemes, no matter how veneered with apparently right ideas. For, as is well known, the more deceptive the veneer of truth the more injurious is the concealed danger that lurks underneath. When it is told to a commercial man that when a member of the medical profession makes a discovery, which places him in decided advance of his fellows, he does not patent it, does not keep it to himself, he is astonished. His object in life being to cure disease, to relieve misery, not to make money by leaps and bounds, he goes to work most carefully and, with much expenditure of time, teaches his professional brothers. Thus, in a short time he promulgates, far and wide, his discovery. The man of commerce, if this idea has never been present in his mind, smiles, with an air of unbelief; if he does know that it is done must, if he has a grain of chivalry in his nature, own that the medical profession is a calling rightly called almost divine in its exhibition of care for the public. Do they act as if this were a truth beyond dispute? They do not. Again comes in the every day grovelling spirit of commercial life and ignores it. When we ask to be decently treated, when we ask for large grants of money from the public chest, a refusal is our answer, or a grant so small that we ourselves have to supplement it as we have had to do in this very university of Toronto. Our remuneration is so small in proportion to our labors as to be a very poor return. Our professional code teaches us to care for our fellowman; but these fellowmen in return publicly give us but the veneer of gratitude; do not give us that which will cost them some self-denial; do not, will not see, that times without number it is shown to us that the path of our duty, the one which we must follow, is not to our financial advantage, but is in full accord with the principles of our profession.

THE HOUSE OF COMMONS ON TUBERCULOSIS.

A lengthy discussion occurred in the Commons on 20th February upon the necessity for taking some steps to diminish the ravages of consumption. Mr. Perley brought up the subject in a capital speech, and several members on both sides of the House joined with him in urging the Government to act.

Mr. Perley (Argenteuil), in moving his resolution declaring that it was expedient to take steps to combat the spread of tuberculosis, said that although a layman both in medicine and law, he felt justified in bringing this subject before the House by reason of the interest which he took in it. From reports which had come to him it appeared that in 1903, 60,540 people died in the Provinces of Ontario and Quebec. Out of this number in Quebec, 2,943 died from tuberculosis, while only 2,017 died from all other contagious diseases. In Ontario, during the same year,

2,723 died from tuberculosis, while only 1,938 died from all other contagious diseases. For the entire Dominion the number of deaths from consumption last year was about eight thousand. Mr. Perley spoke of the ravages of the disease, which he said was easily communicable, and was as easily preventible. Excellent work had been done by sanitariums throughout Canada, of which there were three in Ontario, with a capacity of 210 cases, one in Quebec, capacity 18 patients, and one in Nova Scotia, with a capacity of 16 patients. The Canadian Association for the Prevention of Tuberculosis, was doing a great deal to educate the people on this subject. With the concerted efforts of the municipalities, the several provinces and the Dominion authorities the progress of the disease could be stayed. He felt it was a duty devolving upon the Dominion Parliament to assist in the erection of sanitariums. He believed that a successful fight against tuberculosis could only be made from one central authority, the head of which should be the director-general of public health. Each person who died from tuberculosis represented an annual earning capacity of \$1,000, so that every year there was lost to the country through this disease equivalent to eight millions. If only half the number of lives which were lost from tuberculosis could be saved how the country would benefit. He found nothing in the British North America Act which would prevent the Dominion Government from dealing with this matter. (Applause.)

Mr. Johnston, (West Lambton) seconded the motion in a brief speech, strongly urging the Dominion Government to do something on the lines suggested by Mr. Perley.

Dr. Daniel (St. John) considered Mr. Perley was deserving of the thanks of the House and the country for bringing up this question. Personally he thought tuberculosis could be eradicated. He spoke of the importance of Koch's discovery, and urged the Government to give this matter its sympathetic consideration.

Dr. Sproule (East Grey) said that Parliament took greater interest in the health of brute creation than of human beings, and he commended Mr. Perley for reminding Parliamentarians of their duty. The tuberculin test was applied to animals, but it was not applied to immigrants, and he thought our immigration inspection laws were lax in this respect. Parliament could do a great deal towards stemming this disease. It could educate the public to take precautionary measures, and still better, it could give substantial aid to assist in keeping up the sanatorio.

Mr. Schell, of South Oxford, supported the motion, giving figures to show that several counties in Ontario were meeting with success in fighting tuberculosis. Educational work had been going on for the last three or four years, and had made much progress.

Dr. Schaffner, (Souris) said it had been proved that the educational effect of the sanatorio had been very valuable, and people no longer objected to having them established in their neighborhood. In Manitoba, a request to municipalities had brought subscriptions from 80 per cent. of them for sums ranging from \$25 to \$100.

Mr. Fisher said the appeal made by Mr. Perley was one that the Government should not refuse. In the matter of public health the Dominion had charge of the establishment and maintenance of frontier quarantine stations. The provinces were given the duty of attending to hospitals, etc. Certain work was definitely allotted to the provinces, and it would be inadvisable and impolitic for the Dominion to interfere with it. It would be inadvisable, he thought, to vote any sum for the support or assistance of a sanitarium for tuberculosis as well as for any other disease. There was, however, a very large work that could be done from a hygienic point of view. A small vote taken annually had already been used for obtaining and disseminating information. This had been done at the request of the Association for the Prevention of the Spread of Tuberculosis. No scheme had been promulgated for enlarging this work. If such were done the Government might with propriety increase the vote. Ways might be found to do this without encroaching upon provincial efforts. The establishment of sanatorio had been placed in the hands of the provinces, and had been very successfully commenced. As to the tuberculine test he did not think it could be applied to human beings. In conclusion Mr. Fisher expressed sympathy with the cause, and said that if the Government could do more than it was doing it would be right for them to do so. He would support the motion with these reservations.

Mr. Borden said the House was under a compliment to Mr. Perley for introducing the subject. The fact that the medical men in the House had spoken so strongly in favor of the motion was very significant. It was desirable to wipe out the scourge. Parliament had power to deal with the question, and should not leave it to private individuals. If the resolution were carried the Government would be bound to find out what could be done to lessen the dangers of the disease. There were many ways in which this could be done, by the dissemination of literature, for instance, and by giving financial assistance. Quoting from decisions of Lord Herschel in the Judicial Committee of the Privy Council, Mr. Borden showed that it was well within the power of the Dominion to enact laws for the promotion of public safety, order, or morals, and to pass general sanitary regulations, applicable to the whole Dominion. The question was one of national interest and importance. He had no doubt that a measure could be devised by Parliament to deal with the subject effectively, having regard to the interests of the whole Dominion.

Mr. Miller (South Grey), spoke in favor of the resolution, saying that he would like to see a commission appointed to obtain information upon the subject.

Mr. Perley spoke again briefly, calling attention to the fact that a law of a similar nature had been in force in 1868, when the men who brought about Confederation were in the House. If it had been contrary to the provisions of the British North America Act these men would have noticed it.

Sir William Mulock said there could be no objection to the motion passing.

The motion was carried.

THE VALUE OF PUBLICITY REGARDING TUBERCULOSIS.

D. Lewis points out that the only hope for success in the combat with tuberculosis, lies in a widespread dissemination of knowledge concerning the disease among all classes of society. The matter of first importance is to help the people help themselves, and let them know the truth about every phase of the malady, and its danger to the individual infected, and to others who come in contact with him. The question is a most far-reaching one, and the State, as a whole, is deeply concerned, and should assume an active part in taking measures to restrict infection, and to assist the poor who become diseased. Rational prophylaxis requires especially safeguarding of the child, and this must be carried out on the broadest possible lines. Public facilities for securing wholesome milk for the poor, the provision of temporary homes for infants of tuberculous parents, supervision of the children in schools and employed in factories, and the proper education of parents, are all essential features. Where the adult is concerned, the problem has a bearing on almost every phase of public and private relationships, and building laws, control of water and food supplies, sanitary regulation of conditions in factories, public conveyances, jails, lodging houses, etc., are of paramount importance to intelligent prophylactic endeavor. There is still much to learn, but the essential fact to remember is the necessity at present of disseminating the knowledge that we already have.—*Medical Record*, January 14, 1905.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

THE PATHOLOGY OF EPILEPSY.

The conclusions to the chapter on pathology in Dr. Spratling's book are as follows :

1. Epilepsy is a cerebral disease attended and followed by profound and diffuse cortical degeneration.
2. The morbid changes concern chiefly the destruction of the nuclei of the cells of the sensory type from which the primary departure of the disease originates. Its terminal pathology is a progressive gliosis more or less marked and diffuse.
3. Epilepsy is essentially a sensory phenomenon with a motor manifestation.
4. Its etiopathology rests with a variety of toxic or autotoxic agents not as yet definitely isolated or determined.
5. The disease is grafted upon a cortical organic cellular anomaly, which is induced largely by a faulty heredity, the exact anatomic nature of which is not known.

Jolly reaches the following conclusions :

1. In the brains of epileptics, dating from childhood, are observed glia proliferations, doubtless due to an original developmental anomaly.
2. Other glia proliferations, especially the irregularly-distributed processes with marked cell increase, are associated with encephalitic processes which date in the majority of cases from childhood.
3. Similarly, in cases in which the epilepsy develops in later life as the result of focal disease, glia proliferation occurs most markedly in the neighborhood of such foci.
4. Epileptics, both early and late, tend to show an increase in the glia mesh and the nuclei in proportion to the decrease in intelligence.

DIAGNOSTIC SIGNS IN EARLY PHTHISIS.

In the *Australasian Medical Gazette*, Hirschfield of Brisbane, calls attention to a number of features that are of value in the diagnosis of early tubercular involvement of the lungs. Among others, the characteristic

feature of the early consumptive is the susceptibility of his body temperature to the temperature of the surrounding atmosphere; he continues :

1. There are two factors which raise the otherwise normal temperature of a consumptive patient—heat of surrounding atmosphere and exertion.

2. Each factor is capable of producing the same result by itself; both combined have a greater effect.

3. During the summer or on unusually hot days at other seasons the effect of the outside heat will raise the temperature of the phthisical patient to between 99.2 and 100.4 degrees maxilla if the patient is following his usual occupation without making any special exertion.

4. This rise of temperature can best be noticed early in the afternoon, between 1 and 3 p.m. ; the digestion subsequent upon a meal acting evidently in the same manner as bodily exertion.

5. The effect of outside heat is not marked upon the morning temperature; it may be marked by an abnormally low temperature we are so frequently meeting with in tubercular subjects.

6. If the tuberculosis of the lungs is accompanied by fever, the course of the temperature will be raised by great outside heat by between 2 or 3 degrees, although the patient be absolutely resting.

7. In young and excitable people the rise is more marked than in older and more phlegmatic patients, the fact of coming to see a medical man tending to raise the temperature of the tubercular.

8. Women who menstruate are subject to a rise of temperature without there being anything else the matter with them.

It is well known that cavity formation is accompanied by the appearance of curvature of the spine, but Dr. Hirschfield states that in cases in the early stage, or rather where they have passed through the early stage and have a healed lesion, we can find evidence thereof in the deviation of the spine from the perpendicular, the concavity being towards the healthy side.

Expansion is of little value in the detection of early cases, unless there are pleuritic pains associated. The writer calls attention to a distinctive smell which he has associated with the disease, arising from the breath and comparable to the smell of the breath of diabetic patients; it is not to be smelt on the expectoration and has been noted by other observers, especially in hot climates.

DEATH AND BIRTH RATE IN FRANCE.

The vital statistics of France show, says an exchange, a continuance of the decrease in the birth-rate as compared with other nations, for while the excess of births over deaths in 1901-1902 was 21 per 10,000 inhabitants, the ratio for the same period in Germany was 153, and in Great Britain 119. The official figures just published of the population of France in 1903 are as follows Births, 826,712; deaths, 753,606; excess of births, 73,106; excess in 1902, 83,944. The population of France in 1902 was 38,961,945, and in 1903 was 39,119,095, but in 1903 there were 18,666 fewer births than in 1902. The number of deaths was fewer by 7828 than in 1902. It is pointed out in the report that the increase of population was not due to any increase in the general birth-rate, but solely to the steadily declining death-rate.

CHEMICAL INCOMPATIBILITIES.

Chemical incompatibility may be apparent in three ways :

1. By precipitation or the formation of insoluble compounds.
2. By the evolution of gas.
3. In some instance by changes in the color of the mixture.

The largest class is included in the formation of insoluble compounds by precipitation. This precipitation takes place when two salts, combined, form an insoluble salt by the interchange of radicals. The most important incompatibilities are included in the following table as arranged alphabetically by M. L. Neff, for the convenience of the practitioner :

1. Acids or acid salts are compatible with : alkalies and alkaline salts; alcohols (tinctures) and glycerin; hydrates and carbonates; glucosids; bases; relatively weak or volatile salts.

2. Alkalies are incompatible with : alkaloids and their salts; chloral; acids and their salts; relatively weak salts (halogens); metallic salts; calcium and magnesium salts.

3. Alkaloids and their salts with : alkalies; alkaline salts; halogen salts; tannic acid; phosphoric acid; boric acid and sodium borate; hydriodic acid; carbonic acid and the carbonates.

4. Arsenic is compatible with : tannic acid; salts of metals, especially lead and silver; lime; magnesia.

5. Aqueous solutions are incompatible with : chloroform; metallic salts; essential and fixed oils; alcoholic tinctures; fluid extracts; resinous tinctures.

6. Hydrargyri chloridum mite (calomel) with : antipyrin; alkalies (lime water, etc.); potassium iodid; salts of iron and lead.

7. Carbonic acid and carbonates are incompatible with : iron salts; metallic salts (especially iron); salts of magnesium and calcium; acetic acid (syrupus scillæ).

8. Aqua calcis is incompatible with : salts of mercury (sometimes intentional); carbonates of alkalies; morphin and quinin salts.

9. Mucilages are incompatible with : alcohol and nitrous ether; iron; aqua plumbi; mineral acids.

10. Nitrous ether (sweet spirits of niter) is incompatible with : tincture guaiac; mucilages; antipyrin; ferri sulphas; most of the carbonates.

11. Oxidizing substances, including the permanganates, chlorates, nitrates, etc., are incompatible with : charcoal; ammonium chlorid; tannic acid; sulphur; glycerin.

12. Phosphoric acid and the phosphates are incompatible with : alkaloids; metallic salts, salts of magnesium and calcium.

13. Tannic acid is incompatible with : alkaloids; metallic salts (especially iron and lead); arsenic; digitalis; albumins and gelatin.

14. Gentian preparations will produce a change of color in the mixture when combined with : iron salts; infusion of prunus virginianæ; infusio cinchonæ comp.; silver nitrate; lead salts.

REASONS FOR ABANDONING THE URIC ACID THEORY IN GOUT.

In the *British Medical Journal* for January 21st, Watson of Edinburgh discusses this rather vexed question. The uric acid theory still holds foremost place in the regard of British physicians, but it is being abandoned or modified by many investigators. It received support from Garrod's experiments on the blood of birds, he failed to find uric acid there and Luff interpreted a similar result to mean that uric acid is normally produced in the kidney. The writer examined these results and in four observations on the blood of domestic fowl found a weighable quantity in three and a reaction in the other; he states that Luff has modified his statement in later writings. This negatives the claim that the acid is formed in the kidney.

He then examined six forms of pathological fluids and found uric acid in all although these had no relation to gout, while in leukaemia it may be found in greater quantity than in gout and without any similar manifestations, he finds from this that the presence of this acid in the blood cannot be the causal factor.

Finally he examined the excretion of uric acid during the different stages of the disease and found that there was no variation that would

suggest support for the retention theory. Examination of the pathological appearances in gout led to the belief that there were necrotic areas with a definite relation to the vessels of the part suggesting an infection by the means of the blood stream. Stress was laid also on the appearance of the bone marrow, especially on the disappearance of the marrow proper, and the rarefaction of the bone-trabeculae.

The general conclusions of, the observer are (1) there is an infective element in the disease;(2) uric acid is the feature that gives the inflammation its specific character. This view is supported by the clinical picture of an acute attack.

CHOREA.

W. G. SPILLER, Philadelphia (*Journal A. M. A.*, Feb. 11), thinks that the relation of chorea to rheumatism has been greatly over-estimated. In most of his cases he could not detect it. He also has not been able to recognize any peculiar facies of the disease, nor does he agree with Gordon and Eshner that there is any peculiar characteristic of the patella reflex in chorea. The arsenical treatment of the disease does not seem to be without disadvantages and should be watched very closely. He has seen arsenical neuritis and idiosyncrasy. The pathology of the disorder is still obscure. The "chorea bodies" are not characteristic. Apoplectic hemihypertonia is distinct from athetosis; the spasm is tonic, unilateral, associated with a little weakness, but not with contractures, develops after an apoplectic attack, and is probably due to irritation of the motor fibers below the cortex. Spiller does not accept Kahler and Pick's theory of the choreiform movements being caused by irritation of the pyramidal tract. It is hard to understand the comparative rarity of hemichorea if this were the case.

SANITARY PRECAUTIONS IN THE CANAL ZONE IN PANAMA.

In the *Medical Record*, February 4th, Dr. Gorgas of the United States Army describes the measures that are being taken to lessen the danger from disease to the workers on the projected Isthmian Canal, and an especial interest attaches thereto as it is one of the most extended public undertakings that has been inaugurated under tropical conditions since the advances that have been made in sanitary science.

There is a tract of country stretching for fifty miles with a population, urban and rural of 12,000, over 70 per cent. of whom by actual investigation are capable of conveying the contagion of malaria and that too, of the deadly Chagres fever or estivo-autumnal form; the *Anopheles* is everywhere to be found. The menace to life that this offers and the

practical increase in the difficulty of the undertaking and in the consequent expense in lives and money were well exemplified in the case of the Suez Canal.

The methods adopted are two-fold, first to destroy as far as possible the breeding places of the mosquito along the line of the works and the rendering immune of the population by proper treatment, and the sequestration of active cases of yellow fever so that they may not offer infection to the insects. The Panama government has given to the Medical Officer of the United States Government a free hand in the matter and a series of hospitals are being set up suited for the care of the sick in the various stages of the diseases. The results will be watched closely by all interested in public health work.

DR. TIRARD ON SOME NEW REMEDIES.

At the December meeting of the Therapeutical Society Dr. Tirard read a valuable paper on some clinical observations on certain new remedies. Uricedine, he said, or lithium citrate, with lemon juice and soda had been recommended for gout, uric acid concretions, and rheumatism. Really it chiefly acted as a laxative, and did not relieve the pain of gout, nor dissolve uric acid concretions. Its dose was 1 to 2 drachms. Urotropine made from formaldehyde and ammonia was said to be a diuretic which relieved cystitis bacilli in urine, but unless well diluted it might cause hæmaturia, and sometimes strangury, albuminuria and abdominal pains, such bad symptoms, however, did not happen if each dose were diluted with 5 oz. of water. In cases of offensive urine, and in doses of 5 to 15 gr., with uric acid sand, he found it to remove the offensive smell and diminish the sand. Aspirin, or acetylsalicylic acid, was not better than salicylic acid, and often produced dyspepsia and profuse perspiration, sometimes diarrhoea. In headache from overwork in gouty persons, it often relieved the pain, and caused sleep, but the patient should be in bed after taking it, because of the perspiration. The dose was 10 gr., given in tablet form, since it was very insoluble in water. Mesolan, or mesoxylester of salicylic acid, was readily absorbed by the skin if applied with olive oil. It relieved the pain and stiffness of rheumatism when fever ceased. Sometimes it irritated the skin if rubbed on it, or if covered too thickly, or if mixed with water. It should be painted on with a brush, and well diluted with olive oil without water. Otoferrin, made by heating iron tartrate with serum albumen, increased the hæmoglobin. In a severe case of pernicious anæmia, its use with liquor arsenicalis, 15 minims thrice daily, increased hæmoglobin 64 per cent. It should not be diluted till taken, or it might decompose.— *Med. Times and Hosp. Gazette.*

DIFFERENTIAL DIAGNOSIS BETWEEN EPIDEMIC AND TUBERCULAR MENINGITIS.

	EPIDEMIC FORM.	TUBERCULAR FORM.
Onset,	Sudden,	More insidious.
Coma,	Comparatively early,	Rather late.
Spinal symptoms,	Symptoms prominent,	Inconspicuous.
Retraction of head,	Early symptoms and rigidity,	Seldom seen.
Course,	Runs at times a rapid or acute course,	As a rule runs a more protracted course.
Skin eruptions,	In more than half the cases; herpes, petechial,	Rare and not herpetic or petechial.
Lumbar puncture,	Diplococcus intracellularis,	Tubercle bacilli.
Kernig's sign,	More likely and early owing to spinal involvement,	Late if at all.
General hyperæsthesia of skin,,	Prominent,	Not prominent.
Cranial nerve palsies,	In protracted cases,	More commonly has palsies of ocular and peripheral muscles, hemiplegia and aphasia. Tuberculosis of other organs.
Optic neuritis,	Not uncommon after four or five days,	Occurs late if at all.
Pulse ratio,	To temperature often less than normal,	
	Deafness,	Grinding of teeth. Hydrocephalic cry. Tubercles in choroid as late symptoms.

 CONVULSIVE TIC.

According to H. T. PATRICK of Chicago (*Journal A. M. A.*, February 11), convulsive tic may be said to be a habit spasm, a sort of motor expression of an imperative impulse. It may develop from some peculiar motion incident to the patient's occupation, but its original cause is generally sensory—some uncomfortable sensation which an attempt is made

to relieve by a movement which finally becomes habitual. It does not affect voluntary movements, is diminished by quiet, rest or mental diversion and is aggravated by self-consciousness, observation, excitement, etc. The prognosis varies. In children, it is ordinarily good, but in adults it is often rebellious. The patients are generally nervous and unstable and, in cases of children, unwise parents and rearing are often responsible. With them the habit may be broken by judicious diversion or correction. With adults the treatment is apt to be unsatisfactory, but Patrick thinks the soporific treatment, keeping the patient asleep for two or three weeks at a time, using hypnotics judiciously with frequent changes of the drug, followed by the educational exercises of Brissaud, will be found most effective in the spasmodic torticollis of the adult.

ADRENALIN CHLORIDE IN HEMORRHAGE COMPLICATING TYPHOID FEVER.

M. CLAYTON THRUSH, M. D. (*Therapeutic Gazette*, December, 1904), in discussing adrenalin chloride as a remedy for hemorrhage occurring in typhoid fever, says :

- (1) Adrenalin chloride is the most powerful hemostatic known and is especially valuable in hemorrhage complicating typhoid fever.
- (2) The best results are obtained from this remedy only when the typhoid fever is treated in all respects in the most approved manner.
- (3) The remedy depends for its value on the property it possesses of being a vascular stimulant.
- (4) The remedy is best administered hypodermically.
- (5) Adrenalin administered by mouth has an effect similar to that obtained when the remedy is used hypodermically, but the action is slower.
- (6) Adrenalin is indicated in all forms of hemorrhage.
- (7) In hemorrhage complicating typhoid fever twenty minim doses of a one to one thousand preparation (the form in which it is usually sold) should be given hypodermically every three hours until the hemorrhage has been controlled, or until twelve hours of such treatment has passed, when the remedy should be continued by mouth in ten minim doses for a period of twenty-four hours.

The usual course of applying ice to the abdomen, of elevating the foot of the bed, and of avoiding the use of fluids is recommended as a valuable adjunct to the treatment described above.

Doctor Thrush describes ten cases of typhoid fever in which hemorrhage occurred and to which treatment with adrenalin chloride was applied. In all these cases the hemorrhage was controlled and in all a final recovery of health was reached.—*The Physician and Surgeon*.

HYSTERICAL MOVEMENTS.

H. T. PERSHING, Denver (*Journal A. M. A.*, February 11), gives the diagnostic points of hysterical movements as compared with chorea and convulsive tic. One characteristic is that they are always movements which can be produced voluntarily, though this also may be the case with convulsions from organic disease. The more regular the movement the greater the probability that it is hysterical, but the possibility of hysteria complicating other conditions must not be forgotten. The most characteristic movement is a rhythmic oscillation involving one part, and next are certain highly co-ordinated movements, such as jumping or dancing, with or without impairment of consciousness. Chorea may simulate hysteria and be due to similar emotional causes and the diagnosis may be difficult. Hysterical movements are more likely to be regular and grouped in distinct paroxysms and to have more of the staccato movement, but most of the rules for distinguishing these diseases require qualification. Hysterical movements of a limb may simulate Jacksonian epilepsy, but there is no rise of temperature, no paralysis nor mental deterioration. Prognosis and treatment must be guided by general principles. A cure is always possible, though the condition may be obstinate. Moral treatment is imperative. If the patient's mental processes can not be happily directed, everything else will be useless. If they are so directed the rest will be easy.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division; Surgeon Toronto Western Hospital.

THE MANAGEMENT OF HERNIA IN INFANCY AND CHILDHOOD, WITH RESULTS OF OPERATIVE TREATMENT.

W. B. Coley (*Jour Amer. Med. Ass.*, Jan. 14, 1905), reviews the results of a series of herniæ occurring in infancy and childhood. He believes that no case should be submitted to operation before the fourth year of age unless (1) there is a history of strangulation; (2) the hernia becomes irreducible; (3) there is gradual increase in the size of the hernia; (4) the hernia is femoral; (5) there is present a reducible hydrocele.

Patients under four years of age show a 66 2-3 per cent cure from mechanical (truss) treatment, the "opposite side," or "cross body," truss being preferred, and it must be worn night and day.

Coley always performs the Bassini operation, transplanting the cord and putting one suture above it. He reports 230 cases so operated on, without a recurrence.

If the hernia is complicated by undescended testicle, the operation should be performed before the fourth year. Owing to the shortness of the cord, it should not be transplanted in these cases.

Coley reports 775 cases of inguinal herniæ in children, operated on by Bassini's method (i e. with transplantation of the cord). In this series there were three recurrences, fifteen cases were operated on without transplanting the cord, and in this series there were five recurrences.

CAUSE OF DEATH IN OPERATED CASES OF INTESTINAL PERFORATION OCCURRING IN TYPHOID FEVER.

Anderson (*American Medicine*, Dec. 31, 1904), reports his experience in twenty-one cases of laparotomy in perforation. In three the condition resembled perforation, as typhoid appendicitis, mesenteric gland infection, and obstruction from mass of round worms in the ileum; in which paralytic ileus occurred. In twelve cases the patients were operated upon under thirty-six hours from the onset of first symptoms with six recoveries. Three of these were the foregoing three cases. In the remaining nine cases the patients were operated upon from two to four days after perforation and all died. In nine cases there was special treatment by draining or irrigating the lumen of the bowel. Four of these patients recovered. In the others, the post-operative symptoms were less severe. Anderson believes that there is a danger of sepsis from the contents of the paralytic bowel, as well as from the peritonitis; that shock as a cause of death is usually rare during typhoid fever; that anaesthesia and operations are well borne, if performed carefully; that the peritoneum acquires some immunity to infection during typhoid fever, but that paralytic ileus is readily produced in the inflamed and ulcerated intestine, and the natural protective function of the mucous membrane is destroyed and serious toxæmia occurs early; that while perfecting our technics to cure the peritonitis, we must remember that the contents of the paralyzed bowel may become a cause of death, and must be removed.

A QUESTION IN GALLBLADDER SURGERY.—CHOLECYSTOTOMY OR CHOLECYSTECTOMY?

H. F. Brownlee (*Medical Record*, Dec. 10, 1904), says that in gallbladder surgery as in various other branches, the initial impulse has had a tendency to carry operators too far and that a somewhat more conserva-

tive attitude should be adopted in dealing with the gallbladder. The custom advocated by many surgeons of removing the gallbladder in all cases when lesions exist in the organ, is supported by the claim that the operation *per se* is not dangerous, and that secondary operations involve more risk, while removal of the gallbladder provides greater surety against the reformation of stones and a greater degree of neatness and thoroughness of operation. The author is in accord with these views in dealing with cases in which the gallbladder is from any source atrophied or diseases beyond repair, but he believes that the viscus has a well-defined function which cannot with impunity be ignored and that it should not be sacrificed when repair is still possible. The gallbladder represents a safety valve for the liver, and in cases where the bile ducts become secondarily obstructed after a cholecystectomy the liver is directly acted upon by the retrograde pressure, and the interval during which surgical intervention may still prove effectual is greatly shortened. A case in point is quoted by the author in which a patient with an atrophied gallbladder quickly succumbed to a stone impacted in the ampulla of the common duct in spite of operative aid. Infection of the gallbladder a second time is an exception to the prevailing rule, as is also a second accumulation of stones, and the author believes that calculi will form more readily in a distended common duct when the gallbladder is absent, and that infection leading directly to the liver will have easier access to the organ already under unfavorable conditions in being obliged to store within itself its own production for variable lengths of time.

THE PRESENT ATTITUDE REGARDING THE TREATMENT OF PROSTATIC HYPERTROPHY.

M. W. Ware says that absolute retention that cannot be relieved by catheter, intravesical hemorrhage, coexisting calculus, and sepsis following long, badly performed catheterization, are all indications for surgical treatment of the prostate. When the patient shows only the first signs of prostatic enlargement, it is a question whether to condemn him to a long seige of catheter life and its pitfalls, or forthwith to subject him to the chances of an operation. In these cases the line must be drawn as to social conditions, and when these are of the highest order, the author advises carefully conducted catheterism by the physician, to be followed by operation on the slightest evidence of deterioration in the status of the patient. In the lower walks of life operation is always preferable. The perineal operation deserves the lead, as it spares the seminal vesicles, and it is a matter of necessity when there is suppurative inflammation of the

prostate or urethral disease. The suprapubic route is more advantageous in the presence of calculus, vesical hemorrhage, a large diverticulum, when the growth is largely vesical, or is beyond rectal reach owing to a narrow pelvic outlet, as well as in the very obese. Bottini's operation, permanent suprapubic drainage, and the catheter *à demeure* have their place, but vasectomy and ligation of the internal iliacs do not deserve recognition. Cystoscopy is an important preliminary, and the after-treatment often takes longer than the patient expected.—*Medical Record*, December 31, 1904.

SERUM THERAPY OF TETANUS.

F. A. Suter (*Arch of Chir.* Bd. lxxv, Hft. 1), after carefully considering the cases reported in literature, of tetanus treated with antitetanic serum, reaches the following conclusion: If, owing to conditions present at the time of operation, tetanus is feared, the serum should be injected *before* the operation. If the patient has received an accidental wound which is suspicious, the serum should be injected as soon as possible. If the wound has healed *per primam*, then one injection is sufficient; whereas, if the wound suppurates the injections should be repeated.

The immunity which results from the injection lasts a varying time, according to the variety of serum used; but it never lasts longer than from two weeks and a half to three weeks. If the wound suppurates profusely two injections should be given the first week, one the second week, and then one every two weeks.

A REVIEW OF SOME RECENT PAPERS ON THE SURGICAL TREATMENT OF PROSTATIC HYPERTROPHY.

E. G. Ballenger gives the history of the development of prostatic surgery and the indications for, and technique of, the different modes of operative treatment in vogue at present. Suprapubic drainage of the bladder is advised in those cases too weak to withstand an operation; if improvement follows this procedure, then a radical operation is indicated. There are three radical methods that are without doubt the most valuable; suprapubic prostatectomy, perineal prostatectomy, and the Bottini operation, and each of these has a definite place in prostatic surgery. All patients should be operated on before the breakdown in catheter life, and the earlier the operation the fewer will be the complications encountered. The suprapubic route is indicated when there is a large intravesicular, mobile, adenomatous growth, with general health and bladder and kidneys

in a satisfactory condition. The perineal operation is more desirable for small, dense, fibrous prostates firmly attached, and those where the growth is largely around the urethra or back toward the rectum. The Bottini is indicated in those cases where prostatectomy is refused, and in selected cases, where the general health and kidneys counterindicate more radical measures. Of course, it is never to be used for a large, rapidly growing hypertrophy. Marked improvement results in the large majority of cases where the operation has been properly selected and carefully performed.—*Medical Record*, February 4, 1905.

PROSTATECTOMY.

In the weakest and most run-down cases M. B. TINKER, Ithaca, N. Y., (*Journal A. M. A.*, February 11), has employed permanent suprapubic drainage. This is rapidly performed under eucain, and he thinks it is the safest of all procedures. Except in absolutely desperate cases, he believes prostatectomy under local anesthesia is safe as compared with the operation under general anesthesia. The use of adrenalin with the ordinary local anesthesia greatly prolongs and adds to its efficiency, prevents the pain and congestion following, and renders the operation almost bloodless. The knowledge of the nervous anatomy of the parts is, of course, absolutely essential, and the course of the pudic nerve and the long pudendal nerve close to the base of the tuberosity of the ischium are important. He favors the use of Young's tractor, and recommends allowing sufficient time for the anesthetic to act before making the incision. With sensitive or nervous patients he finds it often better to use a little nitrous oxid gas or primary ether anesthesia, as the infiltrating solution can not reach the parts involved in the deeper enucleation. These parts however, are supplied by the hypogastric plexus of the sympathetic and the discomfort is not necessarily great. He reports a case in which he thinks this method of operation was directly life saving.

SOME PAINFUL AFFECTIONS OF THE FEET. DIAGNOSIS AND TREATMENT.

C. Ogilvy discusses the commoner causes of foot pain, with the appropriate treatment. The diagnosis of "rheumatism of the feet" is often made, but is usually incorrect, the symptoms in most cases being due to some deformity, such as eversion, or flat foot. In eversion, or what is

commonly called "weak ankle," the foot is everted, the internal malleolus projects very prominently, the toes point outwards, and the line of strain falls to the inner side of the foot, throwing excessive weight on the inner half of the longitudinal arch. This leads to loss of elasticity of the arch, the foot breaks down and flat foot results. Flat foot in its first stages is not diagnosed correctly in 50 per cent. of the cases, yet an early diagnosis is of the greatest importance, for it is a difficult matter to transform an everted painful foot with a broken-down arch into one which is capable of performing all its functions without pain or discomfort. The treatment may require the use of the Thomas heel, the Whitman plate, the plaster bandage, operation, exercise and massage, singly or in combination according to the nature of the case. Metatarsophalangeal pain is due to weakness of the anterior arch and is treated by the application of a felt pad and adhesive plaster. Bursitis of the heel is less frequently met with and is treated by hollowing out the heel of the shoe or by dissecting out the bursa. The subject of proper footwear is also considered and the essential points of a well fitting shoe are enumerated.—*Medical Record*, January 21, 1905.

STERILE WATER ANESTHESIA IN THE TREATMENT OF HEMORRHOIDS.

In introducing the use of sterile water anesthesia it is with the single purpose of describing briefly the method and results as obtained by me in the treatment of hemorrhoids only, disregarding its application to a broad field of minor surgical operations.

Local anesthesia by a subcutaneous injection of water has been used for the relief of nonoperative pain since 1868; later cocaine, morphine and other drugs were introduced into the nerve trunk or subcutaneously with varying results for the relief of neuralgia.

With a hypodermic syringe the sterilized water is injected into the hemorrhoid after the patient has pushed the tumor into view, which may be facilitated by the previous injection of a glycerine and water solution. The injection into the hemorrhoid is made slowly, steadily and to such a degree as to turn the tissue white. This whitened area represents the field of complete anesthesia. The whitened tumor or tissue is seized with a forceps and held by an assistant. The base is snipped around with a scissors to hold the ligature, which should be small, strong and tightly tied when the portion of hemorrhoid external to it is cut off. Up to this time the patient suffers from a feeling of fullness or when the injection has been rapidly made from a distention pain. Its removal relieves existing discomfort and there is little, if any post-operative pain.

1. Sufficient anesthesia to operate upon one, two or three hemorrhoids at one time with a slight degree of pain.
 2. The hemorrhoid is rolled out in a tumor-like mass, which is quickly handled.
 3. One needs only a hypodermic needle and water, preferably warm.
 4. The anesthesia instantaneously follows the injection.
 5. No dangerous complications have followed the employment of simple sterile water.
 6. That it is apparent from results that injections of carbolic acid are completely superseded by this safe and simple procedure, which can be carried out in the office, and in a shorter time, and cause much less suffering to the patient. *Dr. Martin L. Badken, in Brooklyn Med. Jour.*
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SYPHILIS IN ITS RELATION TO MARRIAGE.

Dr. M. Shellenberg takes Fournier's five conditions as his text in considering this subject in the *Med. Times*, July, 1904. (1) Absence of existing specific accidents. (2) Advanced age of the diathesis. (3) A certain period of absolute immunity consecutive to the last specific manifestations. (4) Non-threatening character of the disease. (5) Sufficient specific treatment.

The first condition is so obvious that he dismisses it in a few words, regretting that, especially in Europe, men may be found who, while thoroughly appreciating the dangers, take the risk, because they have their own interests to advance. Fortunately, says Dr. Shellenberg, American men as a class are not so depraved.

The second condition—the advanced age of the diathesis—the younger the syphilis the greater the danger, and the converse of this is equally true.

Time alone will greatly modify, if not entirely cure, the disease, so far as its power of transmissibility is concerned.

In connection with this, Dr. S. discusses Hutchinson's abortive treatment, and says: He (Mr. H.) rather intimates that any "suspicious sore"—any sore having an appearance suggestive of specific infection, yet not having fully developed specific characteristics—should be treated by the abortive plan, with discretion. (This is not my custom. I am in entire agreement with those who prefer to wait till the diagnosis is certain, and who think that we are not justified in placing a patient under a course of specific treatment for a sore of a doubtful nature.—A. S.). Fournier gives three or four years as the *minimum* time which should elapse before a patient should marry.

In discussing the third condition, Dr. S. mentions no period of absolute immunity. (In my judgment, three years from acquiring the disease is the minimum time; the first two should be years of thorough treatment, and the third and last year must be entirely free from both symptoms and treatment.—A. S.)

The fourth condition, Dr. S. says, "initial benignity," does not constitute a pledge of security for marriage if it be *not* joined with additional guarantees, especially that of a sufficient treatment. Condition 5: Dr. S. does not go into the question of marriage of a patient who has acquired the disease after the age of forty. Patients at this period of life are much less amenable to treatment, and one should be, perhaps, more chary of tolerating, as Dr. S. puts it, marriage.—*Med. Times and Hosp. Gazette.*

TREATMENT OF PRURITUS ANI.

An important paper on this subject was read by Morris at the British Medical Association meeting. He divides the treatment into general and local. All organic and constitutional disturbances must be appropriately dealt with while local treatment is being carried out. Calomel at bedtime, followed by a saline in the morning, is of great service. Locally, scrupulous cleanliness must be enjoined. Cocaine may be used in the form of half-grain suppositories, or as a 4 per cent. ointment. Carbolic acid often acts well, and may be prescribed as a lotion, or as a liniment in combination with olive oil. Carbolic acid, combined with a mercurial ointment, may be tried. Menthol and tar ointments are often of considerable value; while amongst the sedative applications he mentions ichthyol, chloral, borax, benzoin, and tincture of iodine.

He considers that mercury is the best antiseptic to use in such cases, and he prefers the oleate, in combination with the oleate of morphine. The local application of calomel in the form of a powder often has a marvellous effect, as it has a remarkable power of rapidly allaying the itching. At the same time he advises the use of small doses of sulphate of magnesia.—*Med. Times and Hosp. Gazette.*

SUDDEN DEATH, ESPECIALLY FROM EMBOLISM FOLLOWING SURGICAL INTERVENTION.

Byron Robinson subjects the causes of sudden death to an exhaustive analysis and then describes nineteen illustrative cases. A large proportion of the instances of sudden death, are due to embolism, usually through invasion of a vegetative center in the floor of the fourth ventricle,

or through asphxia, caused by embolic lodgment in the pulmonary artery. The operations most often followed by embolism, are those for appendicitis, hemorrhoids, hernia and pelvic diseases, and on the kidney, prostate and bladder. Prophylaxis includes placing the patient in as perfect a condition of physiological and anatomical rest as possible, several days before the operation, and by a complete evacuation (a dozen movements), of the intestinal tract, and flushing of the kidney by giving eight ounces of half decinormal salt solution, every two hours, six times a day. With these two systems drained to a maximum, the patient can be placed in the most perfect state of physiological and anatomical rest, which is the safest condition for any surgical intervention, and is a prophylactic against embolism. Such a state withstands to the highest degree the trauma of anesthesia, shock, peritonitis, infectious invasions, nephritis, pneumonia, and embolus.—*Medical Record*, January 14, 1905.

GYNAECOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

THE NECESSITY FOR EARLY DIAGNOSIS AND EXTIRPATION OF MAMMARY CANCER.

The January number of the *American Journal of Surgery and Gynecology* contains an exhaustive article on the above subject written by Dr. W. L. Rodman, of Philadelphia, and read before the British Medical Association. At the conclusion of the article he sums up as follows:—

1. Cancer is not only increasing in frequency, but in doing so is breaking down barriers hitherto recognized. It occurs more frequently than formerly in young subjects, and has become common in races at one time immune.

2. When affecting young subjects the prognosis is distinctly less favorable, as the lymphatics are both numerous and patent, whereas in the aged many lymph vessels atrophy.

3. An early diagnosis should be made, and no time lost in waiting for an operation, as metastases to the axillary glands and internal organs occur early, often before they are suspected. In 9 per cent. of all cases it is impossible to make a clinical diagnosis.

4. When in doubt as to malignancy, a complete operation should be arranged for; but before removing the breast an exploratory incision should be made into the growth, and a piece from near its centre submitted to a competent pathologist, who, as a rule, will give an accurate report in ten minutes. If malignant, a complete operation should be done immediately.

In women past forty the chances in favor of malignancy are as 13 to 1, and should, therefore, be assumed.

5. Carcinomata of the sternal hemisphere are less common than similar growths in the axillary half of the gland, but are probably more frequent than they are thought to be. The prognosis is worse in them than in cancers of the axillary hemisphere.

6. Recurrences being usually of the skin, its removal cannot be too free. Skin grafting, or closure of the wound by plastic flaps—the preferable method—will frequently, if not usually, be necessary.

7. The pectoral muscles, major and minor, should always be removed, regardless of infection, so that all diseased tissues can be removed in one piece, and the axillary dissection both more thoroughly and safely made. Their loss neither increases the mortality, lengthens the convalescence, nor seriously impairs the subsequent usefulness of the arm.

8. The supraclavicular glands should be removed if palpably enlarged, or if the topmost axillary glands show microscopical involvement; otherwise, their removal is unnecessary.

9. Wounds of the axillary vessels have been infrequent since the muscles have been removed as a routine practice. When occurring in an aseptic operation they have always been recovered from. Moreover, the œdema following is inconstant and transitory, and never a troublesome symptom.

10. Drainage should always be made.

11. The three year limit of Volkmann is insufficient, and should be extended to at least five years. Recurrences may occur after ten or more years.

12. The operative mortality in 2,133 operations performed since 1893 by twenty-one American surgeons was less than 1 per cent. This seems almost incredible, when contrasted with the 15 to 25 per cent. mortality for incomplete operations on the breast in preantiseptic days.

SURGICAL TREATMENT OF FIBRO-MYOMA.

In the *Am. Jour. of Surg. and Gyn.*, February, Dr. J. M. Baldy, of Philadelphia, discusses this important subject. In 1853 the first operations for the removal of the uterus were performed by Burnham and Kimball. The first period in the history of the surgical treatment of these tumors was that when the uterus was sacrificed as a necessity, the second, when an effort was made to cause the disappearance of the tumor without the risk of removing it, and the third, in which we now are, namely, the effort to remove the tumor and save the ovaries, tubes and uterus.

The first period laid the foundation for the present state of the surgery of this subject; but the mortality was high, due to faulty technique and a lack of antiseptic precautions being carried out as at present. The second period was negative in its results. Medicines, the curette, electricity, ligating the vessels, and ovariectomy were tried, but with little success. At the present moment the two surgical procedures are hysterectomy and myomectomy. Hysterectomy may be performed by the abdominal or vaginal routes. When performed by the former route, it may be complete or incomplete; but when by the vaginal route, it must be a pan-hysterectomy.

The vessels are secured by ligature, the cautery, crushing, or forceps. The most reliable method is the ligature. Commonly the vaginal vault is allowed to remain open for drainage, but some close the vault at once. Amputation at the cervix is now performed by ligaturing the vessels, closing the peritoneum over the stump which is dropped into the pelvic cavity. Amputation at the cervical neck is the favored operation, because it is suitable for all cases, it is a short operation, it requires less manipulation, there is less traumatism, less risk of sepsis, and the vaginal vault is kept intact. On the other hand, no good can arise from the removal of the cervix. The relative advantages between the vaginal and the abdominal routes are therefore altogether in favor of the abdominal.

Myomectomy is only suitable for a few cases. The writer condemns it as a general operation for fibroids. Fibroid disease of the uterus is liable to be very general in the uterus and there may be many nodules. Myomectomy fails to remove all these, and recurrence is frequent. Hysterectomy is, therefore, the preferable operation. In choosing myomectomy one would consider the age of the patient, the desire or necessity for an heir.

The need for surgical interference is largely governed by pain, hæmorrhage, rapidity of growth, size, pressure symptoms, recurring attacks of peritonitis, mental condition, and expediency. As to the future of fibroids it may be said that there is no natural cure other than the menopause, that there is no medical cure, that the menopause will relieve some while others become worse, that the menopause may be greatly postponed, and that the large majority of these cases will require surgical interference.

THE USE AND ABUSE OF CURETTAGE OF THE UTERUS.

E. K. Browd says that the apparent simplicity and security of the operation has led to the frequent performance of curettage of the uterus in cases in which the procedure is not only of no service, but may even be directly contra-indicated. It is useful in cases of endometritis not as-

sociated with pelvic inflammations, exudates, or diseased adnexa, in subinvolution of the uterus or retained secundines, in endocervicitis as a prophylactic against carcinoma, in mole pregnancies and in all cases of endometritis of so-called hyperplastic nature. In postpartum infections there is room for much judgment, for, while saprophytic cases with retained membranes, etc., are benefited by curettage, the measure is distinctly contraindicated if the infection is of the septic type. Curettage should not be regarded as a routine treatment for sterility, for it may aggravate existing pathological conditions, while the danger of perforation is very great in curetting for syphilitic, tuberculous, sarcomatous or cancerous degeneration of the endometrium. It should never be performed without an anesthetic, owing to the danger of perforation due to sudden movements of the patient, or in dirty surroundings that cannot be rendered aseptic. A number of cases are cited in which disregard of these rules was followed by serious consequences.— *Medical Record*, January 28, 1905.

THE FETAL NATURE OF CHORIOEPITHELIOMA.

Of the correctness of that name instead of deciduoma malignum, there now seems to be no doubt. Its occurrence at the placental site offers but little difficulty in the way of explanation other than that pertaining to the cause of tumors in general; when found independent of the placenta, a new aspect is given to the question. Findley cites 20 such cases and adds a personal observation; he also refers to several reported instances of chorioepitheliomatous tissue in teratomas of the testicle. Djewitzki reports the occurrence of a tumor of this type in the wall of the urinary bladder of a virgin of 75. Regarding the origin of these, which may be called aberrant chorioepitheliomas, speculation is rife. Shattock, in a further application of his theory, ascribes their occurrence in the testicle to fertilization of ovums in that organ during fetal life. Findley considers them probably due to displacement, when the fetus is little more than a segmentation sphere, of polar bodies or blastomeres and their incorporation in structures, which later form the testicle or other organ containing the growth. Cuthbert Lockyer, in reporting a case, directs special attention to the association of chorioepitheliomas with excessive lutein production in the ovaries, a phase of the question which, as yet, has been disregarded in England. He is strongly inclined to accept Pick's view, that an excess of lutein cells acts upon the developing ovum, converting it into a mole, which is simple or malignant, as the circumstances determine. In three cases of mole, or chorioepithelioma, in which the

ovaries appeared normal or only slightly cystic, Lockyer found, on microscopic examination, the ovarian stroma infiltrated with lutein cells, although cysts were absent. This is important, as showing that naked-eye appearance of ovaries is not reliable in determining this point. This theory is at variance with those previously cited, but possibly possesses just as much right to recognition. Histologic study of the ovaries should be made in every case in which it is possible, with the object of determining the frequency of the association of the conditions named.—*American Medicine*, Feb. 11.

UTERINE RETRODEVIATIONS.

LUCY WAITE, Chicago, (*Journal A. M. A.*, February 11), discusses whether operations for these conditions are necessary; whether they are safe surgical procedures, and whether they have been sufficiently successful to warrant their advocacy in the future. She answers each question in the negative. In 1,000 cases taken from the records of her clinic, 39 per cent. were found with retro-deviation. In 15 per cent. of these there were no gynecologic symptoms. The remainder were recorded as complicated with definite pathologic conditions, tumors pyosalpinx, chronic disease of ovaries, myometritis, etc. She notes the effects of fixation on an organ, the interference with circulation, etc., and from all the data in her observation and from what she has found in the literature, she concludes that a normal uterus may lie in any position in the pelvis other pathologic complications. This answers her first question. As without causing symptoms, and that when these occur they are due to regards the safety of the operation of ventrofixation, she quotes from numerous authorities showing its effects on the progress of pregnancy and delivery, and the dangers of strangulation, ileus, etc. Vaginal fixation is almost as bad in its results as ventrosuspension, and the best that can be said of the methods of shortening the round ligaments is that they are not dangerous excepting by weakening the abdominal wall and increasing the risk of hernia. On the other hand, they are unsuccessful in a large percentage of cases and, in view of the answer to the first question, are unnecessary.

DECIDUOMA MALIGNUM.

Deciduoma is undoubtedly a disease which is growing more frequent, or, at least, is more frequently diagnosed. It is astonishing that so grave a malady was overlooked until Säger drew attention to it in 1898. The growth differs from all other neoplasms. The essential element is a large giant cell. This cell is imbedded in a kind of cellular tissue, which

resembles sarcoma. The presence of so much sarcoma-like substance has raised the question whether the disease is not essentially a sarcoma. Bland Sutton holds that it is a sarcoma arising in decidual tissue. From sarcoma, however, it is differentiated by being composed largely of epithelial cells. (I show here to-night a specimen of sarcoma of the uterus which, to the naked eye, at any rate, presents quite a different appearance from the uterus infected with deciduoma malignum). Roberts, in his work on "Gynæcological Pathology," says: "The syncytial theory of the plasmoidal masses seems unnecessary, and the great majority of cases of so-called deciduoma malignum ought really to be classed as rapidly growing sarcomata; the connection of the growth with a preceding pregnancy is not proved in every case, nor its development from structures which can be definitely recognized as foetal relics."

This appears to have been the view held by most English gynæcologists, until J. H. Teacher published his well-known paper on "Chorion Epithelioma" in 1903. Most of the German, French, and American writers agree with Teacher in believing that these new growths originate from foetal relics. Teacher concludes his very able and exhaustive article on the subject by saying: "I think it is proved that (1) the so-called deciduoma malignum is a tumour arising in connection with a pregnancy, and originating from the epithelium of the chorionic villi (or its fore-runner the trophoblast), which is of foetal ectoblastic origin. (2) These tumours form quite a characteristic group, clinically, pathologically, and developmentally, and that they should be classified neither as sarcoma, nor as carcinoma, but as a distinct group *sui generis*. (3) The most appropriate name, therefore, is chorion epithelioma (or chorio-epithelioma) malignum."

Deciduoma was formerly supposed to be due to the degeneration changes resulting from a mole pregnancy. Later investigations, however, have shown that the mole is not necessary in its development, although favoring its growth.—Dr. Hamilton in the *Australasian Med. Gazette*.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal.

POWER OF THE LIVER TO DESTROY DIPHTHERIA TOXIN.

Sir Lauder Brunton and T. J. Bokenham, in experiments upon guinea pigs, rabbits and cats, found: 1. By the circulation of diphtheria toxin through the liver its lethal action is greatly diminished. This diminu-

tion occurs whether the toxin is mixed with blood or an indifferent fluid. 2. Bile from such livers has a slightly antitoxic action, as has also the expressed juice of the liver. 3. Nucleoproteids separated from the juice of these livers possess a marked antitoxic action. The experiments tend to show that the liver not only diminishes the lethal activity of diphtheria toxin, but also probably forms an antitoxin. This depends not upon the blood but upon the liver tissue itself. This is similar to the power exercised by the liver in lessening toxic action of peptones during digestion. The experiments are also believed to support the view that immunity, natural or acquired, is nothing more than the extension to the cells of tissue generally of the power constantly exercised during digestion by those of the intestine and liver.—*American Medicine*, Feb. 11.

THREE CASES OF EXCESSIVE FETAL DEVELOPMENT.

J. Rosenberg reports three cases which illustrate the difficulty of diagnosing oversize of the fetus. If the pelvic diameters are normal, the condition is usually not discovered till labor has been prolonged, and attempts to deliver have proved futile. The time for Cæsarean section has then passed, and the mothers are best served by perforating the dead or moribund child. The only safe and reliable guides are the external and internal pelvic measurements, and if these measurements are normal or approximately so (with hardly any exception) cesarean section is not indicated. Patients with a prior history of abnormal fetal development should not be permitted to go to full term. If not seen until labor has begun, the case should be conducted with extreme care and conservatism. Membranes are preserved until interference has been decided upon, as nothing can be gained by rupturing the waters, but there is increased liability to infection, and version may be made impossible. Symphysiotomy is never indicated, as the slight increase in pelvic diameters is not in proportion to the dangers of the operation. Cesarean section is hardly more dangerous, requires less complicated after-treatment, and abdomen and uterus once opened there is no doubt about our ability to deliver the fetus. In one of the author's cases the fetus, which weighed nearly thirteen pounds, was delivered by version and lived. One other fetus which was unusually difficult to extract, and even after perforation and decapitation required eventration, weighed, minus blood and brains, fourteen pounds. The other fetus, delivered by version and perforation of the aftercoming head, weighed twelve and a half pounds.—*Medical Record*, January 7, 1905.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

PRIMARY TUBERCULOSIS OF THE PHARYNGEAL TONSIL.

Barstow (Medical Record, Oct. 8) gives notes on a patient who had had cough, pains in the chest, sweats, and a large number of tubercle bacilli in the sputum. A well advanced lung lesion was expected, but on careful examination none was found. A mass of adenoids was present in the nasopharynx, which was removed by operation. The symptoms improved immediately and the bacilli almost entirely disappeared.

HEADACHE AND DISEASES OF THE NOSE AND THROAT.

Oscar Wilkinson has classified the diseases of the nose and nasopharynx that produce headache. The first of these is morbid conditions of the mucous membrane, under which heading is acute and chronic rhinitis and as subdivisions of acute rhinitis, simple, specific and neurotic. Headache is one of the most constant symptoms of acute rhinitis. In specific rhinitis, in its incipency, these are the symptoms of acute simple rhinitis, but of decidedly more exaggerated form. There is more pain, more headache, and greater constitutional disturbances. This is especially true in the glandular gonorrheal and diphtheric types. The other specific rhinitis conditions, the tuberculous, and those of lupus, leprosy, and larvas may vary very much in their symptoms in different individuals. In some they are decidedly acute, while in others they are chronic. Headache is not so constant a symptom in chronic cases. In the acute forms, however, headache is almost always a prominent symptom, and may be due to two causes: (1) A local condition due to obstruction of the nasal canal from inflammatory changes; (2) a constitutional condition due to infection from bacteria present. Under the neurotic type of acute rhinitis are placed hay-fever, asthma, and hyperesthetic rhinitis. The author calls attention to two forms of headache in asthma. The first is rather acute, and often severe, due to pressure in the nasal canals from stenosis. The second form is a dull, languid headache, which occurs after a night spent in wrestling with an asthmatic attack, due probably to the character of the inhalation used, loss of sleep, or a night spent in a close room. Morbid conditions of the osteocartilaginous framework are fruitful sources of nasal headache. Under this heading we have deflected septum, thickening of septum, pressure of the septum, exostoses, synechia, and caries. Headache is almost as constant a symptom in sinus inflammations as is unilateral purulent discharge. Of the benign

growths of the nasopharynx which may cause headache are mentioned adenoids, polypi, syphiloma, enchondroma, papilloma, osteoma, and rhinoscleroma. The malignant growths of the nasopharynx which cause headache are carcinoma and sarcoma. *New York Medical Journal*, reviewed in *American Medicine*.

NASAL TREATMENT OF ASTHMA.

Alexander Francis (*Journal Royal Army Medical Corps*, Nov. 1904) with an experience obtained from treating over 400 cases of various kinds of asthma, is responsible for the opinion that it is those asthmatics who present no gross nasal lesions and no subjective nasal symptoms that give the best hope of affording relief from intra-nasal treatment. Francis thinks these cases are due to reflex spasm of the bronchial tubes. The irritation may originate in the nose, as may be inferred from (a) the intimate association between hay-fever and asthma; (b) the very common record of excessive sneezing at some period in the previous history of an asthmatic patient; (c) the not infrequent alteration between asthma and sneezing. Asthma is not due directly to any mechanical obstruction of the nasal passages and is not commonly caused by any gross nasal lesion. Some part of the nasal apparatus has a controlling influence on the respiratory centre; or there is in the nose, as it were, an agency through which the apparent impulses must pass.

GROWTH OF BONE IN THE TONSIL.

W. W. Carter reports a case in which bone, and cartilage in process of transformation into bone, were found imbedded in the connective tissue of the tonsil. The author believes that in these cases the bone originates from the metaplastic changes in the connective tissue, and not from the branchial arch, for the following reasons: (1) At the time that the tonsil develops the branchial arch has disappeared. (2) If the bone came from the arch, it should be uniformly distributed through the organ, and not confined, as it usually is, to the connective tissue. (3) The natural sequence of development of osteomata is from connective tissue, through cartilage to bone. This process is clearly shown in the specimen taken from this case. (4) Analogy with other organs shows that cartilage and bone are frequently found in the connective tissue framework of such glands as the parotid, the mammary gland, and the testis, when these have been subject to chronic inflammation. But since bone does not develop in every tonsil that has been subject to proliferative connective tissue changes, when it does occur we must assume some local predisposing tendency to its formation.—*Medical Record*, February 4, 1905.

CANADIAN MEDICAL LITERATURE

The Canadian Practitioner and Review, February.

OCCIPITO-POSTERIOR LABORS.

Dr. K. C. McIlwraith, of Toronto, has an article on Occipito-Posterior Labors. He reports some cases and then gives the leading features of interest in such cases. The diagnosis is often difficult, but by careful palpation, the examination of the position of the foetal heart sounds usually well out in the flank, or the detection of an ear which will enable the direction of the acciput to be located, a diagnosis may be made out. He cautions against trusting to the sutures. These labors are usually dry, either from early rupture of the membranes or a scanty amount of liquor amnii. Rotation should be performed. This was first attempted by the finger in the vagina. This is uncertain and only succeeds in a small percentage of the cases. Then the whole hand was introduced; but in this method one is not sure that the shoulders are rotated. Finally, the hand and arm are introduced far enough to rotate the shoulders. This plan is recommended. In R. O. P. the right hand pushes the posterior shoulder outwards and backwards; in L. O. P. the right hand pushes the anterior shoulder inwards and to the front. The pressure made with the forceps is such as is required to effect delivery. The os should be dilated thoroughly, and flexion maintained during rotation. The correction of the malposition should be made at the earliest possible moment.

TREATMENT OF CONSUMPTIVES AT HOME.

Dr. Edward Playter, of Toronto, maintains that the pendulum is now coming back to rational methods, and, consequently, we hear a good deal about the home treatment of consumptives. He quotes articles to show that the aggregating of these cases in permanent hospitals is not a good plan from the standpoint of the patient or from that of infection. He refers to the fact that the death rate from this disease began to fall in Britain due to improved sanitary arrangements before the sanatorium wave came in. He states that years ago he had observed some advanced cases with emaciation recover under proper home treatment. He contends that the immediate cause of tuberculosis is an auto-intoxication in a pretubercular stage from deficiency of oxygen in the system from shallow breathing or breathing bad air. Oxygen is the only specific. It is necessary to teach the patient that he must breathe deeply in order to

get more oxygen. This practice of lung gymnastics does not tend to cause hæmorrhages. With care the lung expansion can be greatly increased. When the lungs are seriously impaired special efforts must be made to secure sufficient lung capacity to obtain the oxygen requisite for a cure. The ordinary breathing of the patient in the open air will not do. A strong protest is entered against the custom of stuffing the patient with nourishment. Not one mouthful more should be given than can be digested and made into blood. In addition to beef, eggs, milk, etc., praise is given to sanguis boum, a mixture of ox blood and Malaga wine. When the pulse is over 100 very little exercise should be permitted. The patient should then lie or sit in the sunshine. The skin may be rubbed at night with cod liver oil to which may be added creosote, and a morning bath given. Inunctions of sulphur or iodine compounds over the diseased lung are useful. The only remedy for the cough is cool, pure, or cold fresh air day and night. The cough may be relieved by inhaling menthol or camphor in eucalyptus oil, to which may be added ammonia or potash, or an astringent inhalation if the mucous is copious. He has had a special inhaler constructed by which the patient may constantly inhale the fresh air without too great exposure by means of open windows.

The Montreal Medical Journal, January.

HEALTH RESORTS IN ARIZONA.

Wm. Vaughan gives a very good account of the climate of Arizona and the cost of living in the various towns and their respective advantages. He speaks more particularly with regard to tuberculosis. Phoenix has an altitude of 1,180 feet and contains about 12,000 people. There are a sanatorium, a hospital, hotels and boarding houses. The country around is fine and the roads are good. February has a mean temperature of 54 degrees, varying from 43 degrees to 75 degrees. From October to April the weather is delightfully sunny. The rain fall is about 7 inches. In 1903 there were 266 clear days, 60 partly cloudy, and 32 cloudy. From May to December it is very hot, and the thermometer may go above 100 degrees. There are frequent sand storms. Tucson is elevated 2,400 feet, has a temperature about 2 degrees lower than Phoenix. It has a population of 7,500, and has hotels and boarding houses. The roads around are good. The rainfall is 8½ inches. The means of entertainment for invalids are not good. Oracle is 4,500 above sea level. It is a rather rough place. The roads are fairly good, but the hotels poor. The patients find accommodation in tents. The mean temperature for the winter months is 46 degrees and for the summer months 79 degrees. The rainfall is about 16 inches, and the snowfall is 12 inches. There is a high degree of sunshine, about 85 per cent. of the days. Cas-

tle Creek hot springs is noted for its hot springs. The accommodation at the hotel which remains open from November to April. It is surrounded by hills and is free from sand storms. It is very dry and sunny. The horseback riding is excellent. Prescott is elevated 5,300 feet and contains 5,000 persons. It is a bright, well-built town, and has a hospital. The accommodation is scanty for invalids. A young Canadian, Dr. J. W. Flinn, has started a camp for the open air treatment of tuberculosis. The temperature for July and August is 95 degrees, and for January and February an average of 38 degrees. There is a maximum of sunshine, the rainfall is 16 inches, there are sharp thunderstorms, and about 18 inches of snow fall. It is considered superior to Denver or Colorado Springs. Flagstaff is 6,800 above sea level, but it has poor accommodation. The winter is severe and the altitude is too great for consumptives. The cost of living in all these places is high.

PLACING PERINEAL SUTURES PRIOR TO LACERATION.

Dr. A. Lapthorne Smith, Montreal, calls attention to the advantages of placing sutures in the perineum when it appears that laceration is inevitable. He recommends three. His method is to sterilize the parts, anaesthetize the patient, and place the anterior suture first. The anterior suture is entered at the base of the lesser lip. The second one an inch farther back and the third still farther towards the anus. The thumb is placed in the rectum as a guide and the finger in the vagina. The ends of the sutures are held by a haemostat. The advantages are that there is perfect apposition of the parts and that the muscles are secured. This avoids what too often happens of only securing a skin perineum. Once in a while the sutures may not be required, but this is a small matter. The sutures recommended are silk worm gut, and should be inserted with a curved perineal needle which is inserted on one side, made to travel across the vagina and out on the other side. The needle is then threaded and withdrawn. No doubt this original method of Dr. Smith will prove of much value.

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DIAGNOSIS AND TREATMENT OF METRORRHAGIA.

Dr. F. Monod of Paris, read at the Montreal Medical Society a paper on this subject. He drew attention to the fact that the uterus is an organ that for many years bleeds regularly. He set aside menstruation and bleeding from the gravid uterus. Haemorrhage may be caused by fibroma, cancer, or a polypus; or again from some condition of the uterus

not marked by any acute or chronic affection, or from acute or chronic metritis, from a miscarriage or confinement. There may be a metrorrhagia at the menopause, or connected with lesions of the adnexa, or from an angioma of the mucosa. In some cases metrorrhagia is caused by an infection metritis. There is an essential metrorrhagia from general disturbance or anæmia. At the menopause the bleeding may be caused by some senile change in the uterine tissue or by vascular changes due to the cessation of the menses. In diseases of the tubes and ovaries, as cystic tumors or inflammations, there may be excessive flow from the uterus. Following the expulsion of the ovum there may be a chronic metritis, a portion of retained placenta, or a fungous condition. In the treatment of these cases resort may be had to hot douches. Rest in bed with feet elevated, and vaginal packing. A two per cent. solution of gelatine may be injected into the uterine cavity. This is useful in uterine atony, fibroma or fungoids. Normal saline may be required subcutaneously. Ergot and digitalis cannot be depended upon. Ligature of the uterine arteries should not be performed, as it is better to curette or remove the uterus. In some instances the mucosa may be modified sufficiently by the cautery or by electricity. In some cases the disease in the ovaries and tubes may require their removal. Haemorrhage in old women may call for hysterectomy. The uterine caustics may be tried, such as creosote, camphor, naphthol, tincture of iodine, silver nitrate, and chloride of zinc. The lecturer spoke well of the use of electricity as a uterine stimulant, the galvanic to be preferred. The positive electrode being placed in the uterine cavity and the negative over the abdomen. Vaginal hysterectomy must be resorted to for angiomatous metritis, deciduoma malignum and in metrorrhagia in old women.

INTESTINAL OBSTRUCTION AFTER LABOR FROM A HAEMORRHAGIC CYST.

Dr. T. P. Shaw, Kingston, reports a case where there was acute obstruction of the bowels from a haemorrhagic cyst. On the fourth day after the confinement, she was seized with violent pain in the lower half of the left side and the left iliac fossa. Very tender on palpation. On fifth day, there were tympanites and elevated temperature. In response to the use of enemata and the rectal tube the bowels did not move nor was there any passage of flatus. The temperature rose to 102 degrees. The patient was removed to the Kingston Hospital and operated upon. Here temperature was 102 degrees, pulse 130, and respirations were 22. A tumor could be made out in the median line. On opening the abdomen a dark blue tumor was seen, very tense and the size of an adult head, which was found to be a large, unilocular blood cyst of the

left ovary. The pedicle was twisted. The tumor was delivered through the opening and the pedicle tied with a chain of ligatures of heavy silk. The large vessels were secured by catgut. The obstruction was relieved and the patient recovered.

QUININE AMAUROSIS.

Dr. G. H. Mathewson, Montreal, gives an account of a patient who suffered from amaurosis caused by about 180 grains of quinine taken during a period of eight days by a patient who was ill with puerperal sepsis. The pupils were widely dilated, the tension was normal, vision-P.L., the optic disc was extremely pale with dull surface, and some haziness of the fundus. The arteries were bloodless and the veins paler than normal. She improved up to 6-36, but the field was very constricted. He refers to some of the recorded cases and discusses the literature of the subject from the first cases reported in 1841. The article is a very important contribution to the subject.

THE PRIVILEGES OF MEDICINE.

John McCrae, M.D., L.R.C.P., Montreal, delivered the opening address on the above topic at the Medical Faculty, University of Vermont. In his address he referred to the brotherhood of the profession. He then pointed out that we were apt now to drift away into theory and not acquire such an intimate knowledge of the patient as our forefathers had to acquire. The advance in our knowledge of tropical diseases was referred to. He urged that, while enthusiastic over one's own college, he should be liberal minded towards others, and spoke of the great advantages coming to one from travel, and visiting other seats of learning. Emphasis was laid upon the fact that college days were full of good things, and it behooved students to spend their time well and not upon things that are "not worth the candle." It was well for every student to have high ideals. These may not be all realized, nevertheless, good comes from them. They stimulate towards great things. When college days are over and practice is entered upon many problems come up for study; and none are old problems, as every case has the disease and the patient as two elements in the equation—the latter element ever varying. It is by this searching for the solution of problems and the discovery of truth that the best in the profession can be attained. The monetary object should be secondary, and if the only object must lead to disappointment. One of the great features of the profession is the opportunities for doing good. Some of these may be paid in money, some in gratitude, and some in neither. He quoted the legend: "What I spent I had; what I saved I lost; what I gave I have."

GUNSHOT INJURY AND LARGE GRANULATING SURFACE.

Arthur Kendall, M. D., Cloverdale, B.C., reports a case of injury by a gunshot to the anterior and inner aspect of the right thigh. The skin, subcutaneous tissue and adductor muscles over an area of 14 inches were carried away. The patient was sent to the Royal Columbian Hospital, New Westminster. The wounds had assumed a greenish-black hue. It was necessary to remove both testicles, four inches of the speranatic cords, and the entire scrotum. The wound in the thigh was treated with wet boric acid compresses. The patient made a good recovery. At the end of four weeks the granulation tissue was dissected away down to the muscle. The healthy skin was raised to a distance of two or three inches from the wound. This permitted the wound to be covered with integument without too much tension. Six incisions were made through the skin for drainage. Gauze drains were introduced. In one week the sutures were removed.

The Maritime Medical News, January.

ELECTRO-THERAPY.

This is the title of the paper by Dr. G. G. Corbet of St. John, N. B. He refers to some facts in the history of the subject, and gives a succinct definition of the terms most commonly in use. He then mentions the kinds of electricity, as the animal, thermal, frictional or static, chemical and induced. Mention is made of the important place occupied by the x-rays, and explained the tubes of high frequency as those where the vacuum is rendered very complete, and those of low frequency as examples where the vacuum is not very complete. He calls attention to the fact that matter exists in the solid, liquid, gaseous, and a fourth the radiant form. Some remarks are made on the diagnostic value of the x-rays, and list of diseases given for which the various kinds of electricity are most useful.

RECURRENT DISPLACEMENT OF THE PATELLA.

Dr. R. A. H. MacKeen, of Glace Bay, reports a case where the patella constantly slipped outwards. This condition is due to an unduly long patellar tendon, or to a condition of genu valgum. His method of treatment was the same as that described by Dr. Goldthwait of Boston. A long incision of at least four inches is made over the patellar tendon from the tibial tubercle upwards. The tendon is split longitudinally and the outer half cut off at the tibia. This portion is then passed under the other undivided half. The cut end is then securely fastened to the periosteum of the tibia and the insertion of the sartorius muscle. This gives the patella an inward traction and prevents it from slipping over the outer condyle. The treatment is both simple and effective.

PIONEERS OF MEDICINE IN NOVA SCOTIA.

This is the subject of Dr. D. A. Campbell's interesting article. In a brief biographical manner he gives a short sketch of many of the early practitioners of the Province. From a historical point of view the paper is an interesting one.

ADDRESS OF WELCOME.

Mr. Clark Bell's remarks, at the opening of the American International Congress on Tuberculosis, are brief but earnest. Mr. Clark Bell has done good work in the fight against this disease.

THE SURGICAL TREATMENT OF PUERPERAL SEPSIS.

Dr. H. E. Kendall, of Sydney, C. B., gives a few good points in his paper. If the symptoms of sepsis are mild usually a vaginal or intra-uterine douche will correct the trouble. These may have to be repeated. When the vagina is much bruised or lacerated he advises a formalin douche every two hours. On no account should the curette be used until a late stage of sepsis. The uterus can be cleaned out with finger, the patient being anaesthetised. The operator pressing down the fundus with the hand. When there is good reasons to suspect peritonitis, the writer advises opening up Douglas' cul-de-sac and introducing a good sized gauze drainage. This should be removed in about five days and another put in position. When a septic endometritis has lasted intermittently for three or four weeks and the uterus has become fairly contracted, the sharp curette is of much use.

CONSUMPTION.

This is the short address of Dr. N. K. Foster of California, at the Congress on tuberculosis in St. Louis. He speaks strongly against the habit of advanced cases going to distant places to die, as they would be much better at home. He then refers to the encouraging fact that the death rate from tuberculosis is declining because of the attention given to prevention and a better state of sanitation. An appeal is made for laws to prevent polluting sidewalks, workshops, cars, etc.

ADDRESS ON CONSUMPTION.

When Dr. G. E. DeWitt of Wolfville, N.S. was in St. Louis at the Anti-tuberculosis congress he gave a short address in which he referred to the need for preventive measures, and the fact that Nova Scotia, was taking action. Already a sanatorium, costing \$25,000 has been erected. The Provincial Government was circulating literature on the subject of tuberculosis.

QUEBEC MEDICAL NEWS

Conducted by MALCOLM MACKAY, B.A., M.D., Windsor Mills

The action of Deputy High Constable Lambert in forcibly entering the wards of the Montreal Maternity Hospital has aroused the indignation of the medical men of the city. The Governors of the institution are determined not to let the matter rest until just punishment has been administered to the offender. At a meeting of the Board the following resolution was passed :—"That Mr. Holt, K.C., the hospital's solicitor, be instructed to draw up a complaint to the Attorney-General asking for the dismissal of Deputy High Constable George Lambert, and Special Constable George Pratt, and asking further for some assurance from the Government that such unauthorized and outrageous action shall not be repeated."

It appears that a young man was arrested some time ago on a charge of seduction at the instance of the parents of a young woman. The girl could not be found, and a warrant was issued for her as a material witness. It was rumored that she was in the Montreal Maternity Hospital, and the Deputy High Constable went to look for her. The circumstances of his visit to the institution are told in affidavits sworn before Mr. Lomax, Commissioner of the Supreme Court, by Miss F. S. Gage, Lady Superintendent of the Hospital; Dr. D. S. Evans and Dr. J. C. Cameron.

Miss Gage states that Lambert went to the Hospital accompanied by a special constable named George Pratt, about four o'clock on the afternoon of January 24th. They stated that they had a search warrant for a girl named Lucia Beaupre and exhibited a paper, but in such a manner that it was impossible for her to read it. Miss Gage informed the men that the young woman was not in the house, but they insisted on searching the premises. They refused even to wait until the patients had been warned of their approach, but insisted upon forcing their way into the wards at once. The men went through every room in the house, including the nurses' quarters and Miss Gage's private rooms, keeping their hats and coats on, using abusive language and otherwise behaving in a very ungentlemanly manner. They forced themselves into wards in which were patients who were not in a condition to see any but medical men, going up to the beds, peering into the faces of the patients and looking under the beds. They did the same thing in the nurses' quarters where night nurses were asleep.

The case against the young man came up before Judge Desnoyers, and Dr. Evans who was called as a witness, denounced Lambert in scathing terms, and stated that by his actions he had endangered the lives of a number of inmates of the hospital. He had forced his way into a private ward, in charge of Dr. Evans, in which lay a patient whose confinement had taken place but a few hours before. Lambert's reply was that he had simply done his duty, but admitted that he had no search warrant.

In spite of telegrams to the Attorney-General, Lambert, who was on his way with a prisoner to Switzerland, could not be stopped because he had a special warrant from Ottawa. Arrest was useless because bail would have been at once forthcoming. This, however, will make little difference eventually, as the Governors of the Hospital intend to push the matter to the end. The daily papers and medical journals of the city are strong in the denunciation of the Deputy High Constable's action.

A unique map has been prepared by the League for the Prevention of Tuberculosis and has been hung in its offices to demonstrate the need of further work in the city. It is an ordinary street map of the City of Montreal, bristling with black-headed pins, each pin representing the scene of death of a case of tuberculosis. Since June, 1903, when the league was first organized, about 1,000 deaths have occurred from the disease. The league has possessed itself of information concerning all of these, dealt with all in a greater or less degree, and in 338 cases has supplied not only medical care but material relief.

A year ago the city appointed Mr. Mireault to the staff of the Civic Board of Health, with the duties of Inspector for the League, and he reports that in the past year he has made 2,666 visits. At each house he leaves instructive literature, supplied by the league, and in many cases gives special instructions concerning the nature and treatment of the disease. He states that a great deal of distress is met with in his rounds and that dirty and badly kept houses are one of the worst features with which he has to contend. He has performed 704 disinfections after death, 9,400 sanitary cuspidors have been distributed to patients, and wall-charts on tuberculosis have been placed in 365 institutions, schools, colleges, convents, stations and saloons. The Provincial Health authorities have not been backward in taking steps to see that the law is enforced. Tuberculosis, when it has reached the state of expectoration, is among the diseases of which the health authorities must be notified. Disinfection after death is obligatory, and efforts are now being made to have ordinances against spitting in public places. An important petition has been brought before the Civic Hygiene Committee from the Council of the Canadian Association for the Prevention of Consumption. The

petition prays the city to lend its aid to secure co-operation from the Government, in order that a sanatorium for consumptives may be erected in each Province of the Dominion. Among other facts given in the petition are the following :—"That the death rate of the Dominion from consumption is 8,000 per year."

"That the Province of Quebec suffers to the extent of 2,994 a year from the disease."

"That the total number of invalids from this cause in the Dominion must number 40,000."

"That in Montreal there are 4,000 invalids, of whom 799 die every year."

"That the most effective way to fight tuberculosis is the establishment of at least one sanitarium in each of the Provinces."

In conclusion the petition says :—

"Therefore we would pray the City of Montreal to co-operate with the various Provinces in the efforts that are being made to have such sanitariums erected and maintained."

The Royal Victoria Hospital has passed through a fiery ordeal and has not been found wanting. The blaze starting in the kitchen, which is situated on the top story of the central or administration building, was confined to this portion of the hospital. The greater part of the damage was due to smoke and water, the ceilings being stripped off from many of the rooms. The servants' quarters suffered most severely and the occupants lost most of their personal property. The nurses and doctors, however, were more fortunate, and the greater part of their belongings were uninjured. Ample opportunity was given for a demonstration of the admirable discipline of the institution. Streams from the hospital hose were directed upon the fire a few minutes after it broke out, and the copper-sheathed fire-proof doors in the passage ways to the sections containing the wards were at once closed, thus entirely shutting off the patients from the burning building.

On the arrival of the fire brigade the doctors began to make their morning rounds and it was a sight not to be forgotten to see the firemen outside fighting the flames with the full strength of the fire brigade, while within the doctors, attended by the nurses, were going from bed to bed, the ward maids and orderlies were dusting and sweeping with no apparent disturbance of hospital routine. A few of the patients in the top story were taken down to the bottom floor as there was a chance of the flames leaping from one roof to another, none of the others were moved, although a long line of ambulances were drawn up ready at a moment's notice to begin the transfer to other hospitals.

By the time the fire was under control arrangements had been made with a city hotel to supply meals for the day but by next morning a temporary kitchen had been prepared and things went on as usual. Only one patient was refused admission on account of the fire and that simply because he arrived while the building was still burning, others who came during the day were received as usual. The governors of the hospital and the citizens of Montreal are to be congratulated upon having a staff which responded so nobly in the hour of peril. At a meeting of the board of governors it was decided to put in an independent supply of water for the institution, and the city council is to be asked to establish an up-to-date fire station in the upper part of the city, as some delay occurred before the brigade could get to work, on account of the situation of the hospital. The reconstruction of the damaged portion is already well advanced and owing to the generosity of Lord Strathcona and Lord Mount Stephen will be much finer than the original plan.

The following appointments were made to the staff of the hospital.

Associates in medicine—Drs. Fry, Cushing and McCrae.

Clinical assistants in medicine—Drs. Burnett and McAuley.

Clinical assistants in neurology—Drs. Robertson, Robins and Russell.

Clinical assistant in ophthalmology—Dr. Tooke.

Clinical assistant in gynaecology—Dr. Goodall.

Clinical assistant in laryngology—Dr. Hamilton White.

Registrar and assistant registrar—Dr. Cushing and Dr. McAuley.

Dr. W. J. Cram was appointed externe in the X-Ray department, and Dr. Klotz house pathologist.

At the Montreal Medico Chirurgical Society Dr. Archibald showed a living case of sarcoma of the tibia. Dr. Finley reported on a case of Still's disease and Dr. Garrow upon a penetrating wound of the abdomen and prostatic calculus. Dr. Bell showed a pathological specimen of Hypernephroma of the kidney and Dr. Laphorne Smith reported three cases of repair of injury to the ureter. Dr. Wesley Mills read a paper on Problems of the Nervous System, taking up the question of nerve grafting, and the numerous concepts referring to the works of Purvius Stewart and others upon the regeneration of nerves.

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EDITORIAL.

MATERNAL IMPRESSIONS.

Throughout the ages there have been those who believe in the influence of maternal impressions as a means of affecting the offspring. It is well known how hard common notions or popular superstitions die. The history of medicine furnishes its full quota of such beliefs.

Among beliefs of an unproved nature those concerning the influence of maternal impressions are ancient, numerous, wide spread, and are held by many members of the profession at the present. The mental impressions that have usually been regarded as capable of stamping some mark or peculiarity upon the child are longings on the part of the mother, frights, and other mental impressions.

Of the first kind may be mentioned the craving on the part of the mother for some article of diet or object to wear. The second form of impressions, or frights, is common. The third form of mental impression is such as would arise from emotions or feelings caused by the narration of some event.

The history of the subject is of much interest. Like many other beliefs it arises from the attempt to explain certain phenomena. When a deformed, marked, or monster child was born, the conditions found were sought to be explained on the hypothesis of something in the life or experience of the mother that had made a strong impression upon her mind. The search was made for some longing, fright or emotion. Failing these, often the agency of some demon or evil spirit was invoked. With the growth of learning on the development of the ovum and the spermatozoon, the belief in supernatural causes gradually disappeared; but that regarding power of maternal impressions still remained unimpaired.

During the eighteenth century, Blondel, Haller and Morgagni began to attack the cases of malformations, marks, etc., said to be due to maternal impressions, with the result that most of the cases were rejected by these writers who claimed that the evidence did not justify the view that they were the result of influences acting through the mother's minds. The nineteenth century saw the belief still further shaken. Numerous writers of eminence, such as Baer, Vrolik, Förster, St. Hilaire, Tartuffi,

threw much light upon the subject of foetal development, and raised serious doubts about the probability of embryological laws being altered or modified by impressions operating through the nervous system of the mother. The belief was not quite discarded, but it was held that the impression must be very potent and, perhaps, long continued.

In order that the relationship of cause and effect may be maintained between maternal impressions and physical defects in the child, there must be some definite number of such instances following these supposed causes. Excluding naevi, it would appear that there is one defective or malformed child in every two hundred births. This is a much smaller percentage than record of frights and emotions would lead one to expect. William Hunter, Johannes Müller and G. J. Fisher approached the subject in another way. They enquired of several thousands of expectant mothers with regard to frights and emotions such as would lead them to fear that their offspring might be marked or deformed. The results of these enquiries were quite negative, the children not being affected in any way where there had been strong fears that they would be deformed in some manner.

It has now been settled by embryologists that malformations of the foetus are due to the inhibition of its development. So that if maternal impressions have the power to cause these malformations, it must be because they have power to arrest the normal development of the foetus, and not only such, but to arrest the development in some portion of it. Now, as to this arrest of development of some portion of the body of the foetus, it must be borne in mind that the great majority of the reported cases of fright, etc., occurred at a time in the progress of the pregnancy too late to affect the defective part. So that the mischief must have been done prior to the fright or mental impression. There is a certain date in the period of gestation by which the development of each organ is completed, and beyond the possible influence of any maternal impression. Thus, a hare-lip could not be due to a maternal impression after about the seventh week of pregnancy, but many are attributed to frights at a much later date. The fact is that the embryo is practically differentiated into all its organs by the end of the second month, or at a time when the mother is quite uncertain as to her condition, and when frights and emotions would, therefore, play a very unimportant part. Nearly all the recorded instances where fright, etc., have influenced the development of the foetus, they have occurred at a much later period than the eighth week of gestation.

There are only two possible ways in which maternal impressions can act upon the embryo, namely, through the nervous system, or through the blood. Now, it is definitely known that there is no connection whatever between the nervous system of the mother and that of the unborn child. The foetal portion of the placenta is distinctly separate from the

maternal portion. There is no through-and-through connection. The foetus could no more be influenced through the nervous system of the mother than could a parasite on an animal be affected by changes in the nervous system of its host. In like manner the foetus cannot be inhibited in any portion of its development through the blood. The blood of the foetus and the mother are quite independent of each other. All the maternal blood can do for the foetus is to bring nourishment to it and remove impurities from its blood through the proximity of the two blood streams which, however, do not actually mix with each other.

As has been stated, the formation of the various organs has taken place by the end of the eighth week. Up to this time the growth of the foetus is very rapid, having increased its weight over six thousand times. It is very easy to understand how any changes in pressure could give rise to various deformities. In this way it has been argued that fright may alter the blood supply to the placenta so as to give rise to varying degrees of gaseous pressures on the foetus. If this be a cause for the production of monsters there could be no connection between the nature of the fright and the kind of monster, as the modified pressure might affect any portion of the foetus.

CHRISTIAN SCIENTISTS IN COURT.

On January 4th, 1905, Wallace Goodfellow died in Toronto. It appears that the patient had had an attack of typhoid fever. The condition of the intestines verifying this diagnosis. Dr. Riordan had seen the case, but for eight days the young man was under the care of some Christian Scientists. Four persons, Sarah Goodfellow, Isabella Grant, William Brundrett and Elizabeth See were brought up under a charge of manslaughter.

On the evening of January 3rd, Dr. Carveth, of Toronto, was called in. The room was very poorly lighted, and, as the patient was very weak, it was difficult to make a thorough examination. Dr. Carveth concluded from the rapid breathing, exhaustion, and almost unconscious condition of the patient, that he was suffering from pneumonia. The prognosis was given as extremely unfavorable. The patient died in the afternoon of the 4th January. Dr. Carveth gave a certificate of death from pneumonia to the brother who called for it.

The authorities were aware of the fact that young Goodfellow had been under the treatment of the Christian Scientists and decided to have the case investigated. This we think was quite proper. The investigation brought out the facts that Goodfellow had had an attack of typhoid fever and that he had been allowed up. The post mortem revealed evidence of much exhaustion of the muscular system.

There is no law to compel a person over 21 years of age to send for a doctor, but there ought to be a law that would render it impossible for a person to take charge of any case who has not the requisite qualifications for such duties. Christian Scientists have no knowledge of medicine, surgery and obstetrics. Indeed, they declare that the teachings of medical men are all wrong, and there is no such thing as disease, as it is only a delusion of mortal mind. All you require to do to be well is to believe that you are well and there will be no longer any pain or sickness. Persons holding such wild views should be prevented by the most stringent legislation from attending or administering in any way to the wants of the sick or injured.

As the law now stands it is difficult to secure a conviction against Christian Scientists, Osteopaths, etc., because they do not give medicine. This is too limited a view of the science of medicine; and the law should be so amended. A physician may attend an obstetric case, make use of the forceps, repair a lacerated perineum and see the case until the patient is out of bed and never give a single dose of medicine. In like manner, he may attend a case of typhoid fever throughout its entire course without the aid of drugs in any form. In both of these cases he may have displayed great skill. It is, therefore, quite apparent that the taking charge of a sick or injured person with the view of restoring him to health is what should constitute responsible attendance, and what should clearly come within the cognizance of the law as medical or surgical attendance. While it is quite proper that none but the legally qualified practitioner should have any authority to charge for attendance upon the sick, the fact that the non-qualified person makes no charge should not in the least exempt him from the fullest responsibility for whatever he may have done, either by way of advice or drugs. Until this is made absolutely clear the profession and the public will not be protected.

The time has now come when the medical profession should insist upon the medical act being so amended as to render it impossible for those who have received no qualification to assume the charge of medical and surgical cases. It should make no difference whether they charge or do not charge. The most essential feature of the law should be the protection of the citizen. The individual is not always a capable judge as the fitness or otherwise of different classes of "doctors" or "healers." It is, therefore, the duty of the State to protect him against the "unqualified," as much as it is to protect him against adulteration of food or light weights. The condition should be secured under the law that any one who announces himself to take care of the sick or injured should at least have conformed to a standard of medical studies that will ensure reasonable degree of skill. With a united effort, this can be secured. Let the effort be made.

Police Magistrate G. T. Denison committed Mrs. Elizabeth See, Mrs. Sarah Goodfellow, Mrs. Isabella M. Grant and Wm. Brundrett to stand their trial at the next Assizes on a charge of manslaughter.

The statements from the evidence of Mrs. Isabella M. Stewart may prove interesting :—

"With reference to the cure of bodily ills, what is Christian Science?" was the first question asked by Crown Attorney Curry, when Mrs. Stewart took the stand.

"It is the law applied to individual consciousness to determine what is the law of God, as set forth by Mrs. Baker G. Eddy. She applied herself for nine years before she taught it to her followers. We in turn have followed that law, and find it clearly proved beyond a doubt that it is demonstrable."

"Do you treat people who are ill yourself?"

"Yes, sir."

"Did you treat Wallace Goodfellow?"

"No, but I gave his mother the names of some Scientists who would be prepared to take up treatment for him."

"What is the usual charge for treatment?"

"There was no stated price, but some years ago the National Board of Christian Science of the United States established a fee of \$1 a visit to the house for professional services."

"Are you confident that Mrs. Eddy is in a position to declare the law of God?"

"I firmly believe so."

DOCTORS IN THE ONTARIO LEGISLATURE.

At the recent Provincial elections for the Ontario Legislature the following medical practitioners were elected: Dr. M. Currie, Prince Edward; Dr. R. E. Clapp, South Bruce; Dr. Lewis, Dufferin; Dr. J. O. Reaume, North Essex; Dr. Smellie, Fort William; Dr. Jamieson, South Grey; Dr. A. W. Nixon, Halton; Dr. Preston, Lanark; Dr. Jessop, Lincoln; Dr. Willoughby, East Northumberland; Dr. R. A. Pyne, East Toronto; Dr. Beattie Nesbitt, North Toronto. Dr. Pyne has been chosen as Minister of Education, and Dr. Reaume holds the portfolio of Public Works.

THE HOUSE OF COMMONS ON TUBERCULOSIS

In another page we give a report of the discussion in the House of Commons on Tuberculosis. THE CANADA LANCET has frequently urged action in this matter, and is glad that the indications are that the voice of the medical profession in this matter is going to have its influence.

THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

This is one of the most worthy of all the medical associations. So far it has not received the support it merits, but hope there are better days in store for it. With an object so worthy it is impossible for it to fail.

Already the association has proven itself to be of the greatest possible usefulness to those who belong to it. A number of suits have been fought by the association and with a very great success.

It is the intention of the association to try to bring its claims before the profession in some sort of a personal way. We have on several occasions expressed the wish that the many societies scattered over the country would take this matter up and induce their members to become members of the Protective Association.

We cannot too strongly urge the claims of this association.

SUIT AGAINST TORONTO GENERAL HOSPITAL.

A short time ago a patient who had been in the Toronto General Hospital brought an action at law to recover \$160 which he claimed had been taken from him by the hospital or some one of its employees. It was argued that the hospital could not be made responsible for an act of this character. The acts as they refer to hotels, boarding houses and hospitals were quoted to show that the hospital was not liable. Judgment was given in favor of the hospital.

THE PROFESSION AND THE NORTH WEST.

At a meeting of the Toronto Medical Society held on 16th February, it was moved by Dr. A. A. Macdonald and seconded by Dr. E. E. King, and carried: That whereas in the near future the North West Territories will be divided into provinces; and whereas the Medical Councils of those new provinces will establish regulations governing medical practice therein, and whereas it is desirable to encourage the settlement of physicians from the older provinces in that new district to supply the increased population; therefore the Toronto Medical Society respectfully urge the Government of Canada to make provision allowing licensed practitioners from the older provinces who register within a period of years after autonomy has been granted to be recognized as fully qualified practitioners within the newly organized provinces.

The above resolution is very well as far as it goes. It must be borne in mind, however, that these new provinces will establish their own form of medical control and fix their own medical standards. Anything that

might be gained by the above resolution would only last for a short time. What is needed is a much more radical measure.

A couple of years ago most of us thought that a solution of the difficulty had been attained when Dr. Roddick of Montreal, then a member of the House of Commons, succeeded in carrying through the House his bill for the establishment of a Dominion Medical Council. But there was one weak point in the act—that all the provinces had to give their assent.

The province of Quebec refused its assent, and thus far the act remains inoperative. The question of most importance before the medical profession of Canada is that the act be so amended that as soon as say five of the provinces give their consent the act may come into force for these provinces. The other provinces would soon join in.

Already Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia have expressed their approval of the measure. These provinces, by amendment suggested, could form a medical council with powers covering them. When Quebec saw the splendid results that would follow there is not the slightest doubt but that it would also come into the union, and cause the medical council to be truly national.

We hope for this glorious day when provincialism in the medical profession will have passed away, when a new, a brighter era will have dawned, and when a doctor who is qualified to practise in Halifax would also be qualified to practise in Victoria without further examinations.

The matter is entirely in the hands of the medical profession. If the medical practitioners of the various provinces take this matter up with energy they will be sure of success. The Federal Government would no doubt hearken to the wish of these provinces and enable an almost complete National Medical Council to come into existence. Let this be the goal of all.

BRITISH COLUMBIA MEDICAL COUNCIL AND DR. VEREERTBRUGGHEN.

Dr. Vereertbrugghen is a Belgian physician who located at Kamloops sometime ago. In order that he might legally practise in the Province, it was necessary for him to pass the examination prescribed by the Medical Council for British Columbia. Dr. Vereertbrugghen was successful at the examination. Some time afterwards, Dr. Proctor, who was an examiner, complained that the Belgian doctor was making statements against him to the effect that he had tried to pluck Dr. Vereertbrugghen. The matter came before the council and the Belgian was given an opportunity to apologize; but he declined to do this. After hearing a

good deal of evidence the Council erased his name from the register, declaring his action to be "infamous and disgraceful in professional respect."

The doctor appealed and the case was heard before Mr. Justice Morrison, Mr. A. R. McPhillips, K.C., appeared for the Medical Council and Mr. Joseph Martin, K.C., for the doctor. The case was argued at some length. The Judge decided to restore the doctor's name to the register.

PLASMIDIOPHORA OF CARCINOMA.

The discovery of the cause of any disease is a very important event. When Koch announced his discovery of the bacillus of tuberculosis a new era dawned so far as this disease is concerned; for it is since that date—1882—that all the great work has been done towards the prevention of the disease, and many useful lives saved thereby. The wings of cholera, the plague, yellow fever have been clipped. We may soon clip the wings of carcinoma.

In *The Lancet* for January 28 there is an article of far more than passing interest. Drs. W. Ford Robertson and Henry Wade contribute a paper on the etiology of carcinoma. They mention the work of Gaylord Behla, Roswell Park, and others in search of a parasite, and claim that they themselves have isolated a parasite of the class plasmodiophora brassicae. After much research they succeeded with a silver stain and toning with gold, platinum and palladium in revealing in carcinomatous tissues the presence of the various stages of the growth of the plasmodiophora brassicae.

In 1876, Woronin discovered the plasmodiophora in vegetables and made the statement that it would yet be found that cancer in man was due to such a parasite. The vegetable commonly affected is the turnip. The tumors which this parasite causes on this vegetable are called in Germany Kohlhernie, in the United States club root, and in Britain finger-and-toe disease. The parasite passes through a number of stages in its growth and it is the clear knowledge of these that alone can clear up its relationship to carcinoma. It would appear that one stage of growth is in the turnip and another in the ground.

The authors have studied with great care the life history of this parasite as it is revealed in the vegetable, and then applied this knowledge to a comparative study of the parasite as they contend it to be found in carcinomata. The tumors studied were cancer breasts and malignant adenomata and secondarily affected glands. These were all obtained from cases operated upon. Controls were used of various inflammatory con-

ditions of a number of organs. In these examples of cancer they claim to have found the plasmodiophora by their method of staining.

By a very careful method, the writers have been able to make cultures from cancerous breasts and other cancerous specimens of an organism that resembles in its various stages of growth the plasmodiophora brassicae. This culture from the cancerous tumor they call the plasmodiophora carcimomtatis. These researches would appear to throw light upon the work of Russel and San Felice who discovered bodies they called blastomycetes.

But if we turn from the work of the above writers and attempt to obtain confirmatory evidence from the clinical study of cancer, we come to a most important and interesting phase of the question. Tuberculosis is a germ disease; and in its history we have infection by the germ, irritation of the tissues, the formation of tubercles, the ulceration of those, the saturation of the system with toxines, the presence of fever, loss of flesh, and death. If we turn to syphilis, another germ disease we have infection, the formation of a chancre, induration of the glands, fever, loss of flesh, toxaemia, the existence of gummata, ulceration, and often death when the disease is not controlled by treatment. Again, take leprosy. Here we have an infection, the formation of tubercles, the loss of tissue, fever, failure in strength, and at last death. In cancer there is the formation of a nodule, its growth, the spread of the disease to adjacent parts, the chronic poisoning of the system, fever, loss of flesh, the breaking down of the growth and the formation of an ulcerating surface, and the death of the patient. Shall we omit the word infection when we are clearly justified in using the term in speaking of tuberculosis, syphilis and leprosy? The strongest evidence we have of the parasitic origin of cancer seems to come from the clinical side.

The question has been raised "If cancer be of parasitic origin how are we to explain the origin of deciduoma malignum which is now admitted to a carcinoma?" Deciduoma is a malignant development from the foetal side of conception. The explanation is perhaps not far to seek, and when the truth is known may be the strongest proof of the parasitic origin of cancer. It is against all clinical experience to meet with cancer in the very young, much less the foetus. But grant that the uterus already contains the parasite of cancer when impregnation takes place, and it may be easy enough to understand how the foetal portions of the conception become the seat of a most malignant form of cancer. It is well known that this form of malignant growth follows hydatid mole with considerable frequency. May we not in this fact also have another stage of the process. The uterus is already the seat of malignant disease; conception takes place, a hydatid mole results, expulsion is effected, but the

disease still goes on with great rapidity in the active vascular conditions induced by the pregnancy.

Prof. Orth, of Berlin, a short time ago declared in St. Louis that no one had shown the parasitic origin of cancer, nor was it necessary to assume such an origin. The wiseacres opposed the germ theory of disease, and then of tuberculosis, but they turned out to be wrong. It might be answered to Professor Orth that no one has proven the germ origin of syphilis, yet no one doubts it, not even Prof. Orth.

But there are still other features in the history of cancer that must not be passed over in silence. In the first place, the disease is very much more prevalent than it formerly was, and, according to some good authorities, bids fair to be one of the most common of all our diseases. In the second place, it shows a tendency to attack its victims at younger ages than some years ago. And, in the third place, it is appearing among races formerly immune. These facts would seem to prove beyond all doubt that the disease has some cause that is communicable. The very same things occurred in the history of leprosy some centuries ago.

PERSONAL AND NEWS ITEMS.

Dr. J. R. Jones has returned to Winnipeg from his trip to Florida.

Dr. and Mrs. Shirres of Montreal, have returned from their trip to Panama.

Dr. and Mrs. J. O. Orr of Toronto, sailed, February 2nd, by the Baltic for England.

Dr. G. R. McDonagh, 140 Carlton street, left in the end of January for a six weeks' trip in the southern portion of Italy.

Dr. R. J. Crawford has returned to Winnipeg to resume his practice, after being away in Europe for the past two years.

Dr. Cragg, of Calgary, is attending to the duties of Dr. Mewburn, of Lethbridge, during his vacation in the east.

Dr. W. H. B. Aikins and Mrs. Aikins, of Toronto, have sailed for Mediterranean ports on the steamer Princess Irene.

Dr. D. B. Bentley was removed to the Sarnia general hospital two weeks ago suffering from a serious attack of appendicitis.

Dr. Marion Hansford has been appointed as attending physician to the Metropolitan Dispensary, Notre Dame Street West.

Dr. Mackay of Cookstown, has sold his practice to Dr. Rounthwaite of Toronto. The new doctor has assumed his duties.

Dr. R. C. Redmond, B. A., who has formed a partnership with Dr. J. C. Chisholm of Wingham, arrived there a few weeks ago.

Dr. Harry Bleecker has opened an office for the practice of medicine at Roblins Mills. Dr. Bleecker is a clever, energetic Trenton boy.

Dr. W. H. Moody, of Vancouver, B. C., was married in St. Thomas, Ontario, a few weeks ago to Miss Irene Hawkins, of the latter place.

Dr. Sloan, of Lion's Head, has sold his practice to Dr. Thomson, a former practitioner on the Peninsula. Dr. Sloan will move to his farm.

Dr. and Mrs. Parfitt, of Gravenhurst, were in London and Toronto recently. Dr. Parfitt was in Toronto for a medical board meeting of the sanitarium.

Dr. A. H. Beaton was very ill with pneumonia lately. The crisis, however, has passed and his many friends will be pleased to learn that he is recovering nicely.

Dr. Pelletier, M.L.A., who has been seriously ill from blood poisoning, received while operating on a patient, is now recovering steadily and all danger is passed.

Dr. Draeseke, late surgeon on the C. P. R. liner Athenian, left recently on a visit to his old home in Dundas, Ont. His place on the Athenian has been taken by Dr. McKay.

Dr. E. K. Murray, of Flesherton, was so much improved in health as to be able to leave his bed on 12th February for the first time since January 29th, when he was taken down.

Dr. Amys having purchased the property and practice of the late Dr. Pigeon, who resided at 270 Charlotte street, Peterborough, will have his surgery at the above address.

Dr. and Mrs. Oldright, and Miss Oldright returned on the 30th January from the West Indies. They were delayed two days on the voyage by adverse winds and snowstorms.

Dr. and Mrs. Graham, formerly of Toronto, who have been for the last year and a half in the Northwest, spent a few weeks recently with Mrs. J. F. Stewart, 189 Spadina avenue, Toronto.

Dr. John Bromley of Pembroke has gone to Edinburgh, Scotland, to take a post graduate course in medicine, while Allan Hale of the same town is away to the old country for the benefit of his health.

Dr. Lazelle Anderson has opened offices in the Erickson block, Granville street, Vancouver, B. C., and intends making a specialty of children's diseases, having spent a year in the children's hospital in New York.

Dr. Carder, who has had charge of Dr. Beck's practice at Port Arthur, for the past year, left this morning for Toronto, London and other eastern cities, where he will visit for a few weeks prior to sailing for England.

Dr. Brefney O'Reilly has left for Baltimore, where he will spend three months, taking Dr. William Osler's last course of lectures on clinical medicine at Johns Hopkins University, prior to Dr. Osler's leaving for Oxford in May next.

The many friends of Dr. Johnson, of Elora, will be pleased to learn that he is still improving in health, although but slowly. He is able to go out for a short drive or walk, and it is hoped that his convalescence will now be rapid.

Dr. McGuigan, the ex-Mayor, has resumed the practice of medicine, and in future will devote his entire time to the duties of his profession at his old office over the Owl Drugstore, corner of Abbott and Cordova streets, Vancouver, B.C.

On Wednesday evening 18th January, at the residence of the bride's parents in Madoc, Dr. N. Ford Sutton, of Maynooth, son of Dr. H. H. Sutton, of Madoc was united in marriage to Miss Frank Weir, daughter of Mr. and Mrs. Armour Weir.

During 1904, 15,090 copies of Gould's dictionaries were sold, making a total of 181,173 of these medical dictionaries issued by Messrs. Blakes-ton & Co.

Dr. B. S. Price and Mrs. Price, of St. John, N. B., left for New York and sailed from there on 26th January by White Star steamer Arabic for a trip to the Mediteranian. They will visit Egypt, Constantinople, Palestine and other points of interest, returning by way of England. They will be absent about three months.

The annual meeting of the Canadian Association for the prevention of Consumption will be held in Ottawa on the 15th March next. The afternoon will be devoted to the routine business of the Association. In the evening a lecture will be delivered by Dr. Adami of Montreal on some phase of the crusade against consumption. His Excellency the Governor-General will preside on the occasion.

A pretty event took place at the residence of J. E. Varley, St. Thomas, on 2nd February, when Miss Maude M. Philip, daughter of the late Rev. John Philip, D.D., of Kingston, formerly minister of First Methodist Church, St. Thomas, was united in marriage to Dr. Ernest W. DeLong, of Cayley, formerly of Gananoque, Ontario.

The next meeting of the American Anti-Tuberculosis League will be held in Atlanta, Ga., April 17th to 19th, 1905. Governor J. M. Terrell has tendered the Hall of the House of Representatives to the Georgia State Capitol for the use of the League during the meeting, he will deliver an address to the League on the first morning, as will other distinguished men. The opening session is intended to be a broad one, in an educational sense, and the heads of the largest educational institutions of the United States will be invited to be present. Reduced rates will be had on all roads. Hotel rates will also be made special for visitors.

Dr. A. W. Mayburry, of Spadina avenue, and Dr. E. Herbert Adams, of Queen and Bond streets, have returned to Toronto from a trip to the tropics, Jamaica being their chief objective point. They have been investigating the advantages of the climate and hotel appointments of this British possession as compared with the more commonly visited resorts of the Carolinas, Georgia, and Florida.

By order of Mr. Justice Morrison, the names of Doctors Telford, Vancouver, and Veerertbrugghen, Kamloops, will be replaced on the roll of licensed practitioners of British Columbia. Their names had been expunged by the Medical Council for alleged unprofessional conduct. This decision practically limits the powers of the council, and makes the judgments of the council subject to appeal to the courts.

Dr. Frank Wesbrook, professor of bacteriology of the State University of Minnesota, and also State bacteriologist who was, at a recent meeting at Savannah, elected as president of the American Health Association, arrived in Winnipeg on 11th February. Dr. Wesbrook is well known in Winnipeg, and in fact is a Winnipeg boy, graduating from the Manitoba Medical College. The doctor, who is a friend of Dr. Bell, of the college faculty, addressed the latter's class at the college on the subject of "Bovine and Human Tuberculosis."

Dr. Wm. Burt, President of the Ontario Medical Association, recently paid a visit to Toronto to review the work done by the two main committees in advancing the Association's interests for the year. A considerable number of papers have been promised, which, with the assurance of Dr. Ochsner's presence, already guarantee the success of the meeting. This will take place Tuesday, Wednesday and Thursday, the 6th, 7th and 8th of June, in the Medical Buildings, Queens Park, Toronto. The character of the work done by this parent Association of the Province warrants the attendance of every practitioner who can get to Toronto to hear the papers presented.

Dr. J. A. Tolmie, of Moose Creek, Ont., a graduate of McGill University, who has travelled through Great Britain, Africa and India in the past two years, is now in Montreal. Dr. Tolmie entered McGill in 1898 and graduated with the degree of M.D. in 1902. Going to Europe he studied at the universities of Edinburgh and Glasgow. From Scotland he went to South Africa, where he visited the Transvaal and the scenes of the recent Boer war. Then Dr. Tolmie journeyed to India, spent some time in Calcutta and other historical places. After an absence of two years he returned to Canada two weeks ago. Dr. Tolmie leaves shortly for Manitoba, where he intends to practice.

The new wing of the Woodstock hospital was officially opened with an appropriate ceremony on 14th February, Mr. J. W. Flavelle, of Toronto, being the chief speaker. The new addition cost nearly \$16,000,

and affords largely increased accommodation for both nurses and patients. Included in the new equipment is a suite of operating-rooms, the gift of Mr. John D. Patterson, of that city. Mr. Flavelle and several Toronto doctors who inspected them to-day pronounced them among the finest on the continent, and superior in some respects to the operating-room of the Toronto General Hospital. At the proceedings to-day the city and county officials were present, together with a large number of citizens from the city and outside places. Among those present from Toronto were Dr. Bruce Smith, Dr. B. E. McKenzie, Dr. Bruce, Dr. Palmer, and Dr. O'Reilly, who was one of the speakers. During the proceedings a letter was read from Mr. Chester Massey, of Toronto, expressing sympathy in the work of the hospital, and enclosing a cheque for \$1,000, contribution to current expenses.

OBITUARY.

H. W. SPENCE, M. D.

Harry W. Spence, M. D., son of R. W. Spence, of Toronto, died 24 January, after a brief illness. He graduated in 1900 from the Toronto University, went to England, and obtained the diploma of M.R.C.S., from London. During the South African War he was attached to one of the British Regiments in his professional capacity. After the termination of the war he spent some time in India. He returned to Canada in 1904, and commenced his practice in Ottawa.

SYDNEY E. TYNER, M. D.

Dr. Sydney E. Tyner, of Kingston, died in the Orthopedic Hospital, New York, 14th February, after an illness of four days of spinal meningitis. He left home only a few weeks ago to take an appointment as house surgeon in the above-named institution. He graduated from Queen's Medical College last spring. His mother and two brothers survive, one being Dr. W. G. Tyner, of Picton. The remains were brought home. Deceased was about twenty-five years of age.

H. B. McCONNELL, M. D.

Dr. H. B. McConnell, a native of Toronto, died 26th January, after a brief illness at his home in West Somerville, a suburb of Boston. He was at his Boston office on the previous Saturday, and to all outward appearances in the full enjoyment of health, but on the following day he was taken ill with a serious internal ailment. An operation was performed on Monday morning, from which he was unable to rally.

Dr. McConnell was thirty-four years of age. He was graduated from McGill College, Montreal, and Trinity College, Toronto. He had practised medicine in Boston for nearly ten years, and was a member of

the Massachusetts Society of Physicians and Surgeons, and house physician at the Massachusetts General Hospital for several years. He was the founder of the Chemists-Electro-Institute, and had his offices in the Hotel Pelham. He leaves a wife and two sons. He had resided in Somerville two years, having lived previously in West Medford.

JAMES MCGREGOR STEVENSON, M. D.

The death occurred 28th January, at Denfield, of Dr. James McGregor Stevenson, brother of Drs. H. A. and W. J. Stevenson, of London, and eldest son of the late Mr. Hugh Stevenson. Deceased had for two days previous to his death been suffering from acute pneumonia, and the end came somewhat suddenly. The late Dr. Stevenson was a native of London, and received his early education there. He afterwards proceeded to McGill University, Montreal, where he graduated at the early age of nineteen years, gaining the Holmes gold medal, and the medal for general proficiency. Being too young to practise, according to the statute, he took a trip to Europe, where he took the English qualifications, and perfected himself in the study of his profession. During the interval he also studied law. He practiced as a physician first in London, then in Bryanston, and finally in Denfield, where he had since remained. Dr. Stevenson was well known as a platform speaker. Dr. Stevenson was married to Miss Powell, of London, by whom he is survived, and also one daughter. Deceased was very widely known and regarded with respect both in his own district and in London, where he had many friends.

CORRESPONDENCE.

DR. CARVETH AND THE CHRISTIAN SCIENTISTS—A STATEMENT.

To the Editor of the Canada Lancet.

Sir,—I had thought my course of 20 years among the medical men of Toronto, in that trying to work honestly and professionally, would have been sufficient to protect me against charges that have been brought against me in this connection, but some statements lately made concerning my dealings with the Christian Science people require explanation from me.

Some years ago the late John Kent, of McCaul Street, was under my care. After a time he left me to try Christian Science treatment. A day or two before death he became comatose and his friends sent for me and Dr. McPhedran. After his death the case was reported to the Crown officers and an investigation was held. The whole matter came before the late Sir Thomas Galt who, in dismissing the case, made the statement that a man may have whatever treatment he wishes when sick, and the law cannot interfere with him.

Since that time a large number of my patients have left me to try Christian Science treatment. Some of these and their friends still come to me when sick for medical treatment. My treatment of these patients is the same as given to all my other patients.

In August, 1901, I was called to Markham Street to see the child of Mr. Lewis. When I reached the house, I found the boy had been dead a short time. Upon examination, I suspected he died of diphtheria. I took a swab from the throat and, with Dr. Wilson, made a culture which turned out to be diphtheria. Upon finding this out, I reported the case as diphtheria to the Health Officer and gave a certificate of death from diphtheria, not knowing at that time that I was doing anything but what the law requires.

In February, 1903, I attended Mr. Frazee, of Spadina Avenue. Some weeks after this I was called in to attend his child. I found the child suffering from a severe form of scarlet fever, which I reported at once to the Health Officer. The child died in two days and I gave a certificate of death from scarlet fever.

In the early part of January of this year I received a message to attend a young man named W. H. Goodfellow at 61½ Vanauley Street, the message stating that the young man was very sick and that his people did not know from what disease he was suffering. I went to the house and found the young man with a pulse of 130, respiration 65, with nostrils dilating, blue-white in color, bathed in perspiration and unconscious, dulness over lower parts of both lungs.

After some hesitation I consented to treat him. I prescribed for him and saw him again next day, when I found him in a dying condition. After leaving the house, his mother-in-law, living near, called me in from the street and explained to me that a medical man (Dr. Riordan) had been in attendance up to within eight days of that time, but that he had received no medical attendance during the last eight days. His diagnosis had been typhoid with lung complication. On the advice of this doctor, his mother-in-law had reported the full circumstances of the case to the Crown Attorney. Knowing that the Crown officers were apprised of the whole matter, I gave a certificate of death from pneumonia, my diagnosis at the time I saw the patient. I gave the certificate, explaining to the patient's brother that, as the case had already been reported to the Crown officers they would likely investigate and that the responsibility would not be upon me.

Yours, etc.,

GEORGE H. CARVETH.

239 College Street, Toronto, Feb. 11th., 1905.

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THE PROSPECTS AND VICISSITUDES OF APPENDICITIS AFTER OPERATION.*

By SIR FREDERICK TREES, BART, K.C.V.O., C.B., LL.D.

Surgeon to His Majesty, the King.

THE matters, Mr. President, which you have done me the honour to discuss arrange themselves under two heads:

1. The degree of imperfect relief, or of imperfect recovery after operation.
2. The complications which may attend operation, and which may be regarded as accidental or independent of the direct surgical results of the case.

I have based the comments upon these two topics, for the most part, on the records in my private case-books. The lamentable deficiencies in these records are, I hope, compensated for by the admirable series of statistics very kindly prepared for me by Mr. Hugh Lett from the registers of the London Hospital. These statistics cover a consecutive period and embrace 1,000 cases of operation for appendicitis. In addition to the colossal labour of transcribing the notes of these cases, Mr. Lett has addressed no less than 797 letters to discharged patients in order that the after history should be, in each instance, complete.

I believe that these particulars, collected with so much patience and care, will form the most important contribution which has yet been made to the statistics of this common malady.

In the account which follows I have kept the records of my own cases distinct from those collected by Mr. Lett, which latter are set out in coherent whole.

*Read before the Royal Medical and Chirurgical Society, February 28th, 1905.
—From *The British Medical Journal*.

I. IMPERFECT RELIEF OR IMPERFECT RECOVERY AFTER OPERATION.

In order that the issues may not be scattered over too wide an area it will be well to consider this question from the point of view of the operation performed during the quiescent period and that carried out for the relief of suppuration during the acute or active stage.

A. Imperfect Results After the Operation of Removing the Appendix During the Quiescent Period.

It is as long ago as 1887 that I ventured to suggest—in a paper read before this Society—that cases of recurrent appendicitis should be treated by removal of the appendix during the period of quiescence. My proposal was not very enthusiastically received at the time, but of later years I have no ground for complaint on this head. The procedure is one of the most common of abdominal operations, and certainly one of the most satisfactory. It is attended with but trifling risk and with but little distress to the patient, while in the vast majority of instances it is followed by a complete and unconditional cure.

I find, however, in my case-books the records of 45 patients who consulted me, and in whom the operation had—from their point of view—more or less completely failed. Had I been the operator in all these examples it would be possible to express the dissatisfied patient in the form of a percentage, but I am responsible for but the minority of them. The collection, therefore, from a statistical point of view, is almost valueless. It is natural that a patient who feels that an operation has failed should pour his woes into the ears of other than the operator. Thus it is that we all have to search for many of our failures without the walls of our own consulting rooms.

The relative frequency of these cases of failure may be gathered from the London Hospital statistics. From these it would appear that among 231 patients in whom the appendix was removed during the quiescent period, no less than 11 complained that since the operation they had "attacks like those they had before it."

I have excluded from my 45 cases all examples of trouble in the healing of the wound and of ventral hernia. Ventral hernia is comparatively rare, but I have noticed that it does not exempt cases performed by methods which are considered to render a yielding of the scar impossible. I have met with only two instances of persisting sinus after this operation. In both cases the sinus had been open from eight to nine months when I first saw the patients, and in both fragments of silk ligature had escaped. Of one of these operations I have no knowledge, but in the other case it was reported that the procedure had been very difficult, and that a gauze drain was necessary.

TABLE A.

Patients who complained of Imperfect Relief after the Removal of the Appendix in the Quiescent Period.

	No. of Cases.
Appendix imperfectly removed... ..	2
Ovarian trouble coexisting... ..	9
Persisting or relapsing colitis... ..	8
Persisting local pain.....	7
Neurasthenia or hypochondriasis.....	5
Continued attacks due to gall stones... ..	3
" " colic... ..	2
" " movable kidney... ..	2
" " stone in kidney... ..	1
" " an unexplained cause.....	1
Tender mass in the right iliac fossa.....	5
	<hr/>
	45

The 45 cases of which I have notes represent patients who came complaining that "they were no better for the operation," or that they were nearly as bad as, or perhaps even worse than, they were before." They also include examples in which "attacks" have continued unabated after the removal of the appendix.

As will be seen from the following summary, the degree of failure claimed to be manifest varies greatly.

A man of 60 from South America consulted me for persisting sinuses in the right iliac region with continued pain and discomfort in that part. The trouble had followed upon a large perityphlitic abscess which had been opened five years previously. The sinuses had been dealt with and counter openings made, but without benefit. Finally the abdomen had been opened and the appendix removed. A well-healed scar in the usual situation indicated the site of this operation. Still no improvement followed. Thinking that a loose concretion may have been overlooked I reopened the abdomen. Buried among many adhesions I came upon an undisturbed but diseased appendix, which I removed. In seven months all the sinuses were healed. I have no explanation to offer for this case, beyond recalling the fact that the statements of patients, even when given emphatically and in perfect faith, are not always to be relied upon.

A second case of this kind was in the person of a youth of 20. His appendix had been removed by an eminent surgeon, during the quies-

cent period, after the third attack. The appendix is said to have been strictured, to have contained no pus, and to have been surrounded by few adhesions. The operation was in August. In the following October the patient had another attack of appendicitis with fever and was in bed ten days. In December he had another attack of some gravity. He had hardly recovered from this when he was again laid up for the third time after the operation. The attacks which followed the operation differed in no essential from those which had preceded it, except in this, that in the second of the early attacks a small abscess was evacuated, which gave no further trouble, nor did suppuration supervene in any of the subsequent outbreaks. As soon as the last attack had subsided—now two years ago—I opened the abdomen in the iliac fossa. The stump of the amputated appendix was swollen, hard and tense. It measured $\frac{3}{4}$ in. Its distal end was well closed in by sutures which were still in evidence. The little tube was distended by muco-pus, and it was strictured at the very point where it opened into the caecum. It was removed, and the patient has had no trouble since. This case suggests the wisdom of always removing the appendix close to the caecum. A stricture at the actual caecal orifice is not common. It would appear to be always so placed in mucocele of the appendix—in those strange examples where the organ is translucent and is distended with a perfectly clear white jelly. In connection with this matter I may mention that in one operation after I had removed the appendix—as I thought—close to the caecum I found that the proximal end of the tube had been invaginated into the caput coli. The little intussusception was therefore at once reduced and the appendix re-excised.

Two cases, allied to the above, were found by Mr. Lett among the London Hospital records. In one the appendix was removed after the third attack. It was described as "half an inch long and very adherent." The patient subsequently had two more attacks. After the second outbreak the remainder of the appendix was discovered and removed. In the other instances an abscess was opened and "the appendix removed." The patient had another attack with suppuration, when a considerable portion of appendix was found and excised.

I find among the series now under notice no less than 9 cases in which continued trouble after the operation was due to mischief in the right ovary. In some of these examples an inflamed, prolapsed, or adherent ovary had been noted at the time of the operation, but had not been removed. In others a second abdominal section was performed for continued distress, and a diseased ovary discovered and removed. In nearly all these cases the condition before operation would be described as chronic appendicitis supervening on acute or subacute attacks.

The following is a typical example : A married lady, aged 30, had an attack of appendicitis in 1893, for which she was confined to bed for ten days, and a second attack in 1896, which laid her up for three weeks. After this attack she was never well. There was continued pain in the right iliac fossa, tenderness there, occasional fever, irregular bowels, dyspepsia, wasting, and a condition of chronic invalidism. In 1897 her appendix was removed. It was free, was much thickened, and was full of muco-pus. The state of the ovary was not noted. She was practically none the better for the operation; her old symptoms persisted, and she remained a chronic invalid. A year later a second abdominal section was made and an adherent, chronically-inflamed ovary discovered and removed, to the patient's complete relief.

It is needless to point out how close is the anatomical association between the vermiform appendix and the right ovary, especially in the matter of their lymphatic vessels. It is very common indeed to find both organs simultaneously inflamed, and the evidence most usually suggests that the ovary was infected from the appendix. In many instances after the appendix has been removed the ovary recovers, or at least gives the patient no further trouble. The surgeon's prejudice will be, naturally, in favour of leaving the ovary unremoved, but I am sure most operators will agree that there is often great difficulty in deciding when this can be done with the confidence that no further inconvenience will follow.

I hope I am not uttering a heresay when I say that it is often almost impossible to distinguish clinically between chronic appendicitis and chronic ovaritis. I have found the appendix sound and the ovary diseased in instances in which competent authorities have stated beforehand that the ovary had no part in the matter, and I have, on the other hand, found a perfectly healthy ovary accredited with mischief-making for which a diseased appendix was in reality answerable.

In operations upon women I think it is very desirable that the right ovary should be systematically examined when the appendix is being removed. If it be found to be entirely healthy, the knowledge is useful should the patient complain—after the operation—of any persistence of her pains.

The small opening made in the abdomen in that operation in which the muscular fibres are split and drawn aside has much to commend it, but it has the objection that it is not always easy to examine the ovary through such a gap, nor to remove the organ should it be found to be diseased, adherent, and deeply placed.

Eight patients out of this collection of those who expressed themselves as unbenefited by the operation were the subjects of colitis. The

following is a typical instance : A married lady, aged 27, developed severe colitis during residence in India. This was followed in due course—after her return to England—by an attack of appendicitis, for which the appendix was removed. The colitis much improved for a while. Some little time after the operation this catarrh of the colon returned. The patient became nervous and despondent, and more or less of an invalid. She had persistent discomfort in the right iliac fossa, tenderness in that region, occasional slight rise of temperature, irregular bowels, flatulence, and an inability to do anything. She maintained that she was in no way better for the operation. After many months the trouble in the colon subsided, and the patient made a good recovery.

The association of colitis and appendicitis is common. In certain cases—especially in those which develop in the tropics—I am under the impression that it is the trouble in the colon that leads, by extension, to the inflammation of the appendix. In other cases the relation is reversed, and the colitis seems to be due to chronic appendicitis. The appendix in such instances is little more than a culture tube for bacteria, the contents of which are emptied from time to time into the caecum. Those individuals who have not had really acute attacks of appendicitis are often justified in maintaining that, for a time at least, they appear to be unrelieved by the operation.

Seven patients in the present series complained of the partial failure of the operation on the grounds of persistent pain in the right iliac fossa. For this pain there was no apparent cause. Of the seven patients three were men and four women, and the ages were between 20 and 33. The following cases will serve as illustrations : A lady, aged 33, had her appendix removed during the quiescent period by a distinguished provincial surgeon. I saw her one year and eight months after the operation. She maintained that she was no better. She complained of abiding and severe pain in the right iliac fossa, and was more or less an invalid. She was nervous, irritable, and full of troubles. The wound was perfect, and nothing abnormal could be found in the abdomen. She had very defective teeth, ate much meat, and suffered greatly from dyspepsia and constipation. It is customary to ascribe all obscure abdominal pains after operation to adhesions, but in this case I was assured that there were no adhesions, that the procedure was most simple, and that the ovaries were normal.

The second case is that of a military officer, aged 32. He was the reverse of neurotic, was active, and most eager to be well. His appendix had been removed two and a half years previously. The wound was sound, the abdomen revealed nothing abnormal, and the patient had the

aspect of perfect health. Ever since the operation, however, he had been troubled with pain in the iliac fossa, which varied in intensity, was of neuralgic type, and occasionally rendered him unfit to do his duty. I could suggest no explanation of the trouble, and sought refuge in those vague neuralgias which occasionally follow an operation. After many months the pain entirely left him.

In five cases out of the series the only explanation of the patient's persisting trouble was the inadequate one that they were neurotic. This, I am aware, is no explanation, for the term "neurotic" is little more than a cloak to cover ignorance. Three of the patients were men and two were women. Their ages ranged from 32 to 49. They all were chronic invalids and all maintained that they were none the better for the operation. The chief complaint was of persisting pain in the appendix area and sense of abiding illness. There was not lacking the environment of sympathetic relatives and much pampering. One patient was haunted by the dread of cancer and was sure that his pain was due to it. Another—a gentleman of 43—was exceedingly gouty, and to gout some of his trouble may have been due. One patient had had his abdomen opened twice already and was searching for a surgeon who would open it a third time.

As a typical example may be mentioned the case of a lady of 32, whose appendix had been removed for chronic appendicitis with subacute attacks. Four years later she maintained that she was "as bad as ever." She was severe in her judgment of the surgeon who had operated upon her. She had constant dyspepsia, with flatulence and irregularity of the bowels, constant pain in the appendix region, where she could feel swellings and tumours which were apparent to no other fingers than her own. She was quite an invalid, and had moved from one health resort to another without benefit. Medical treatment, as a rule, made her worse. The simple measures I suggested did her much harm. Finally she fell in with a "Nature cure," which led to her speedy and complete recovery and to the deepening of her contempt for orthodox medicine.

In 9 instances in the present series attacks were reported to have continued without improvement after the operation. The patient in each instance maintained that the attacks which followed the removal of the appendix were identical with those which preceded it. In 3 examples the attacks were proved, in course of time, to be due to gall stones, in 2 to colic, in 2 to movable kidney, and in 1 to renal calculus. In the remaining instance no explanation of the attacks was forthcoming. In this case, during the first five months after the operation, the patient, a spinster of 37, had four attacks of pain, with a temperature of 100 degrees

to 103 degrees F. These attacks laid her up for from three to seven days. They ceased and never reappeared again. From the patient's account it would appear that the operation would had suppurated.

In the cases of hepatic colic there is no doubt but that gall stones and a diseased appendix coexisted. On two occasions I have removed the appendix and evacuated the gall bladder at one operation, but through two incisions. It is not always easy to diagnose hepatic colic from certain acute disturbances in the appendix. That an operation in certain of these instances may fail to relieve the patient is not improbable. One must remember, also, in connection with these cases what extensive disease may be found in an appendix which has never given the patient the least trouble.

It is easy to imagine a case in which the attacks are due to gall stones, but in which marked tenderness in the iliac fossa leads to the diagnosis of mischief in the appendix. The appendix is removed, its walls are thickened, and its mucous membrane is ulcerated. It has caused no symptoms except the one of local tenderness, and the patient continues to have attacks as badly as before.

The case associated with renal calculus was as follows : A young man of 22 had for two years been liable to attacks of pain in the right iliac fossa, with vomiting and fever. On the last attack, which was one of definite appendicitis, a tender swelling developed in the region of the appendix. The appendix was removed. It was adherent, was bent acutely upon itself, and was full of muco-pus. After the operation, the patient continued to have precisely similar attacks to the number of eight or nine in the year. In these outbreaks there was no fever and no iliac swelling. It was not until these attacks had persisted for four years that the kidney was suspected to be the seat of the trouble. The gland was cut down upon, a calculus discovered and removed. The attacks, which had now lasted for seven years, at once ceased. The two operations were therefore unavoidable.

A case, given by Messrs. Battle and Corner, may here be quoted in illustration of this point : "A boy was said to have had twenty attacks of appendicitis, and when operated on the appendix was normal, but there was an oxalate of lime calculus, the size of a marble, in the pelvis of the right kidney."

In the two examples in which the "attacks" were of the nature of colic, there is little doubt but that the paroxysms of pain were due to adhesions.

In the present series are five cases in which a tender mass appeared in the right iliac fossa some time after the operation. It occasioned

great alarm, and led to the complaint that the patient was none the better for the removal of the appendix. In one instance the mass was simply inflammatory and appeared as a very tender lump, the size of a hen's egg. It was supposed to be due to thickening about a ligature or ligatures. After a few weeks it vanished, but while it lasted the patient was quite an invalid. In three instances the tender lump was a faecal mass, and the patients were so troubled, at the same time, with colic, flatulence and dyspepsia that they maintained that they were no better for the operation. They were both confined to bed for some days. In the fifth example the mass was due to tuberculous glands and there followed upon their appearance tuberculous disease within the abdomen, of which the patient finally died.

B. Imperfect Results after the Evacuation of a Perityphlitic Abscess.

After these operations ventral hernias are quite common, as are also instances of tardy, imperfect, and irregular healing of the wound. Such cases need not now be considered, as they present features of no especial interest.

I find from the records of my case-books that the following imperfect results may follow upon the evacuation of a perityphlitic abscess. They are arranged in percentages, but the figures are of little value, since they do not represent the experience in practice of any one operating surgeon :

TABLE B.

Persistent sinuses.....	40 per cent.
Recurring abscesses...	24 "
Recurring attacks of appendicitis...	16 "
Faecal fistulae.....	12 "
Inflammatory deposits in the iliac fossa.....	8 "

100

With regard to the sinuses, the persistence in the minority of the examples was due to the ordinary conditions which render a sinus obstinate. In some the suppurating tract was long and irregular, or there were many openings, or the main collection of pus was so placed as to be incapable of efficient drainage. In other instances the canal passed through a narrowed strait in a deep fascia or was so placed that it was exposed to constant movement. Many of these sinuses healed spontaneously after many months or yielded to simple treatment. The persisting sinus, in the majority of the examples is due to a diseased appendix, or, as commonly, to a retained concretion.

With the removal of the offending substance the sinus closes. I have seen one instance in which the sinus closed spontaneously, without operation, after it had discharged for seven years; others have closed, under like conditions, after two or three years. To effectually treat the persisting sinus which will not yield to simple measures the area of the appendix must be exposed, that structure removed, and a careful search made for an escaped concretion.

The recurring abscesses show great variation in the manner of their appearing. The original collection of pus is evacuated and drained; the wound heals; after a varying period of time, the patient has pain and tenderness in the part with fever and constipation; a second abscess appears, and is promptly opened.

In a few examples the trouble entirely ends with the healing of the second abscess. In the majority of instances the abscesses are frequently repeated. I have known the abscess appear ten times before the patient was dealt with by a radical operation. The second abscess may appear within a week or so of the first, or, on the other hand, it may not become evident for months.

The following example will show the uncertain progress of these cases. A gentleman, aged 46, had his first attack of appendicitis in June, 1895. An abscess formed and was incised. The wound closed in five months, and the patient made a good recovery. In June, 1896, a second abscess appeared. It was opened, and the wound closed in fourteen days. A third abscess appeared in July, 1897, and here again the incision closed in fourteen days. On no occasion was the appendix or a concretion met with. With the exception of a ventral hernia the patient now remained well and, so far as I know, had no further trouble in the iliac fossa.

There can be little doubt but that the relapsing abscess is due almost without exception to the retention of a diseased appendix or a concretion, and that the condition can only be satisfactorily treated by removing these causes of offence.

In a few instances there is no apparent abscess, but in its place a troublesome inflammatory mass in the iliac fossa or pelvis. One example of this will suffice: A man, aged 28, had his first attack of appendicitis when he was 20. During his second attack, eight years, later, a large abscess formed and burst into the rectum. The patient made a good recovery and remained perfectly well for five months. He then began to complain of a dull pain in the right iliac fossa and rectum, with fever and constipation. He became very ill and wasted. The pelvis was found to be almost filled with a hard inflammatory mass. In four weeks this

slowly subsided, and with it the fever vanished. Although a careful look-out was kept, no matter was known to escape per rectum. Three months after the disappearance of the swelling I removed the appendix. It was behind the caecum in the iliac fossa, was very adherent, was bent upon itself, and full of pus. Nothing abnormal was to be discovered in the pelvis or about the rectum.

Into the very wide subject of faecal fistula after the evacuation of a perityphlitic abscess it is impossible to enter on this occasion. I may be allowed to mention the following points which have impressed themselves upon my mind: (1) That while the faecal fistula exists another attack of appendicitis is exceedingly uncommon. (2) That the fistula, unless due to an actual cutting or tearing of the bowel, has a tendency to close spontaneously. This process may involve months, sometime many months, but healing takes place in the end. (3) That those fistulae which appear some days after the evacuation of the abscess do better than those which are evident at the time of the operation. (4) That a still diseased appendix or a retained concretion is often the cause of the persistence of the fistula.

From the London Hospital statistics it would appear that a faecal fistula may be expected in a little less than 6 per cent. of those cases of abscess which are treated by operation, and that the great majority of such fistulae close spontaneously.

In connection with the sequelae now under discussion the greatest interest attaches to the occurrence of fresh attacks of appendicitis after the abscess has healed. These outbreaks are definite attacks of appendicitis which must be clearly distinguished from those relapsing troubles which may attend an imperfectly-healed abscess cavity. These attacks need not be attended by suppuration, and, indeed, usually are not so associated.

I was at one time disposed to think that the patient who had had a perityphlitic abscess was, ipso facto, cured of his malady, and that although he might have further trouble with the abscess, he need fear no other attack of definite appendicitis. Longer experience has proved that this assumption is not correct. I am of opinion, however, that the number of patients who have definite attacks of appendicitis after a perityphlitic abscess has been evacuated are very few, and that the examples of such relapse in cases in which a concretion is evacuated with the discharge are quite rare. The escape of a concretion is an evidence that the appendix is extensively ruptured. As a result of this rupture it does not necessarily shrink up, as some suppose, but it seldom gives further trouble. Unfortunately, there are cases in which there are two or more concretions, one of which only may be discharged. The patient then has

"attacks" until the remaining substance is evacuated, and an apparent exception is made to what is very nearly a rule.

The interest in this matter centres around the question whether the appendix should be removed during the quiescent period in any case in which an abscess has been opened, but in which the appendix has not been dealt with. Mr. Battle, in his able and interesting work on the Surgery of the Diseases of the Vermiform Appendix, answers this question in the affirmative.

In each such case as has been named he would advise the removal of the appendix. His opinion would appear to be largely based upon the case of a young woman who had an appendix abscess evacuated. Six months later she died of diffused septic peritonitis. The appendix was found to be in a state of acute inflammation and sloughing. There was no concretion present.

Mr. Battle further contends that, even if there be no second attack, the retained appendix may be the seat of chronic trouble and so greatly damage the patient's health.

The first point to be determined in this discussion is the frequency with which further attacks of appendicitis occur in cases of local abscess in which the appendix has not been removed. Dr. Miles Porter considers that such relapses may be expected in 13 per cent. of the cases. Mr. Lett, in his London Hospital statistics, places the number of such relapses at 17.2 per cent. (see Table F). I think that this percentage may be unduly high, since the decision that "the attack since the operation is like that the patient had before the operation" depends, in most cases, solely upon the patient himself. Some of such "attacks" might well be due to trouble associated with an imperfectly-healed abscess.

The appearance of the subsequent attack in these abscess cases shows remarkable variations. For example, among my own cases I notice that in one instance the second attack appeared four weeks after the abscess was evacuated, while in another the patient did not have an attack until two and a half years had elapsed. One individual had only one further attack, while another had five outbreaks in the first eighteen months after the operation. In a third example there were several attacks during the first twelve months, and after that they ceased—or, at least, the patient when he saw me had been free from trouble for five years.

While I think that the appendix should be without doubt removed in any case in which the least trouble is experienced, it appears to me that the following arguments may be urged against the establishment of a rule that in every example of abscess (in which the appendix has been unreduced) it should be excised at the first convenient opportunity.

1. Upon the most liberal estimate it is evident that 83 patients out of every 100 will never have another attack.

2. The risk of a second attack is comparatively small. Thus Mr. Battle, while he places the mortality of the first attack at 25 per cent., gives the mortality of a second attack as 7 per cent., and that of a further attack as 2 per cent.

3. In those cases in which an abscess has formed although the operation is often unexpectedly easy it is often not only very difficult but distinctly dangerous. In certain cases in which the adhesions have proved to be very extensive and dense, and in which the appendix is buried deep in the plevis, I have failed to remove the offending body or even to find it. I cannot help thinking, therefore, that if Mr. Battle's rule became absolute the surgeon would find himself engaged in not a few operations which were attended with considerable risk to life. In the face of the facts above stated,—and keeping in mind the fatal case Mr. Battle mentions—I do not consider that such risk is justified.

4. It may not be unfair to state the belief that the evidence that an abscess has burst into the bowel is not always conclusive. The passage of a quantity of decomposed and long-retained mucus might well give a nurse the impression that pus is being evacuated.

II.—THE COMPLICATIONS WHICH MAY ATTEND OPERATIONS FOR APPENDICITIS.

The length to which this paper has already extended will forbid any but a very superficial discussion of the subject.

With the exception of faecal fistula, intestinal obstruction and the persisting or extending abscess, the principal complications are those only of septic infection. They are such complications as may occur in connection with any septic wound. The fact that the wound is within the range of the portal system permits of the limited blood infection known as pylephlebitis.

With this exception the most conspicuous complications differ in no essential from those which may attend a suppurating stump left after an amputation of the thigh.

Certain of the pleurisies and of the empyemata are due to direct local extension of inflammation from the original seat of infection.

The parotitis is probably due to that septic condition of the mouth which is common in this and in other abdominal disorders.

The common thrombosis of the left femoral vein is not open to a ready explanation. If movement be in any way concerned in this localization it may be noted that while the right thigh is kept at rest the left lower limb is much, and often severely, used in the necessary movements of the patient in bed.

Mr. Lett's statistics (Table E) show the complications which have occurred in 1,000 consecutive cases of operation. In the detailed appendix to that table will be found particulars of the circumstances under

which these complications have occurred, as well as of the period at which they have become manifest. It cannot be claimed that these details reveal any novelty in the familiar history of the infected wound.

STATISTICS COMPILED FROM THE LONDON HOSPITAL RECORDS JULY 1ST, 1900 TO AUGUST 15TH, 1904, BY MR. HUGH LETT, F.R.C.S., LATE SURGICAL REGISTRAR TO THE HOSPITAL.

TABLE C.—Table showing the Local Condition in 1,000 Cases of Appendicitis at the time of the Operation, compiled from the London Hospital Records July 1st, 1900 to August 15th, 1904.

Date.	Total number of Cases operated upon.	Operation during quiescent period.		Operation during attack. Local Peritonitis. No pus.		Operation in cases with abscess.		Operation in cases with general Peritonitis with or without abscess.	
		Re-covered	Died	Re-covered	Died	Re-covered	Died	Re-covered	Died
July 1st to December 31st, 1900	86 (males 59, females 27)	33	0	0	0	39	1	1	12
1901	189 (males 130, females 59)	75	2	6	0	80	1	10	35
1902	230 (males 162, females 68)	75	0	11	3	96	9	8	23
1903	299 (males 200, females 99)	100	1	12	1	124	20	7	34
January 1st to August 15th, 1904	196 (males 130, females 66)	77	1	5	1	77	4	13	18
Grand total..	1,000	360	4	34	5	396	35	39	127

During the above period 290 other patients with appendicitis were admitted into the Hospital, but were not subjected to operation, either because the attacks were so slight or because they declined to submit to surgical measures.

If a patient has several attacks of appendicitis the latter attacks are less severe, and less likely to be accompanied by the formation of an abscess than the earlier ones. This is confirmed by the following table, which includes all the cases of abscess and of general peritonitis in this series. Cases of abscess with general peritonitis are included under the heading of abscess.

TABLE D.—(London Hospital Series.)

	Number of Cases.	Number of Previous Attacks of Appendicitis.				
		Not Stated	None.	One.	Two.	Three or More.
Abscess.....	499	200	187	67	19	26
General peritonitis without abscess.....	101	66	31	3	1	0
Total.....	600	266	218	70	20	26

TABLE E.—(*London Hospital Series.*)*Table to show the Complications met with in the 1,000 Cases.*

Complications.	Number of Cases.
Fæcal Fistula.....	49
Thrombosis of the femoral vein.....	12
Intestinal obstruction.....	10
Bronchopneumonia.....	17
Pleurisy with effusion.....	14
Pleurisy without effusion.....	2
Empyema.....	7
Acute Bronchitis.....	4
Pulmonary embolism.....	1
Parotitis, non-suppurative.....	4
Pylephlebitis.....	4
Residual abscess.....	11
Secondary abscess.....	12

In six of the 1,000 cases the appendicitis was associated with pregnancy.

Fæcal Fistula.

A faecal fistula developed in 49 cases, or in a little less than 6 per cent. of the cases which recovered. In 35 the fistula closed spontaneously. In 2 cases the fistula was closed by operation after it had persisted for seven months in one case, and two and three-quarter years in the other, and in two it still exists. Of the other 10 cases, 5 died soon after the operation, 4 in twelve days or less, and 1 in three weeks with pylephlebitis. In the majority of the cases in which spontaneous healing took place the sinus closed within two months. In one case the fistula closed spontaneously after eight months. Two fistulae are still open two years and eighteen months respectively after their appearance.

Three of the fistulae appeared in ten, fifteen and twenty-four days respectively after the operation; sixteen others appeared within a week of the operation, and twelve of this number appeared within three days.

Thrombosis of the Femoral Vein.

Of the twelve patients who suffered from this complication, 7 were men and 5 were women. The left vein was affected in 11 cases, the right in one case only.

In 11 of the cases the average date at which evidence of thrombosis appeared was twenty-four days after the beginning of the illness. In the remaining case the appendix was removed thirty-six hours after the onset of the attack, and thrombosis took place eleven days later.

With regard to the circumstances of the operation, the appendix had been removed during a quiescent period in three cases. Two of these healed by first intention, but in the third a faecal fistula developed. Of

the remaining cases there was in one general peritonitis, while in all the others an abscess was present.

The above particulars precisely coincide with my own experience of this complication. I have noticed no common factor in the circumstances of the patients who have become the subjects of thrombosis, nor have I any explanation to offer of the fact that the trouble nearly always occurs in the left vein and not in the right.

Acute Intestinal Obstructions.

Ten patients who were the subjects of appendicitis were operated upon for acute intestinal obstruction; 4 recovered, 6 died.

One patient had been ill for five days, and had had symptoms of obstruction for two days. At the operation the appendix was inflamed and adherent to the mesentery, forming a band which caused the obstruction; 4 in. of gangrenous gut was resected.

Another patient had been ill for 10 days, and had had symptoms of obstruction for four days. At the operation, in addition to an abscess in the right iliac fossa and general peritonitis, 14 in. of paralyzed gut were found and resected.

In the other patients the obstruction was due to adhesions or to kinking of the gut, while in one there was a volvulus of the small intestine.

Pulmonary Complications.

There were 45 cases in which pulmonary complications supervened. In 17 there was broncho-pneumonia, in 14 pleurisy with effusion, in 2 pleurisy without effusion, in 7 there was an empyema, in 4 acute bronchitis, and in 1 pulmonary embolism.

All the examples of broncho-pneumonia occurred in cases of abscess or of general peritonitis, with the exception of 2. In these two the appendix had been removed after the attack had subsided. As these were aseptic cases, and as signs of broncho-pneumonia were present on the day following the operation, they were probably examples of ether-pneumonia.

Pleurisy with effusion occurred in 14 cases. In 2 instances there was pleurisy without effusion. In 11 the right side was affected, in 5 the left. In one case only in this series was the appendix removed during a quiescent period.

Of the 7 cases of empyema 6 were on the right side and 1 on the left. The 1 on the left occurred with a left subdiaphragmatic abscess. Three of those on the right side were associated with a right subdiaphragmatic abscess, 2 with general peritonitis (in one of which the empyema commun-

icated with the general peritoneal cavity through a hole in the diaphragm 1 in. in diameter), and the remaining case appeared four weeks after an abscess in the right iliac fossa had been opened.

There were four cases of acute bronchitis. In 1 instance the patient was admitted with acute bronchitis; in 1 case it appeared six days after an operation for an appendix abscess, and in 2 cases it came on after an interim operation.

Parotitis.

Four cases are noted, in none of which did the gland suppurate. The right side was affected in 3 patients, the left in 1. Two cases occurred one and two days respectively after an interim operation, the third case after a large abscess had been opened, while the fourth case followed a laparotomy for general peritonitis two weeks after an abscess had been evacuated.

Pylephlebitis.

There were four instances of pylephlebitis among the thousand cases. One patient, a man aged 30, had been ill for seventeen days before the operation; he had had no previous attack. The temperature was irregular and varied between 100 degrees and 98 degrees, with very occasional rises to 102 degrees or 103 degrees. The local signs were slight, but

TABLE F.—Table to Show the Frequency of Further "Attacks" after Various Operations for Appendicitis. (London Hospital Series.)

Year.	Sex.	Abscess or General Peritonitis.							Interim Operations.		
		Number of cases.	Appendix removed.		Not removed.		Not stated.		Number of cases.	+	o
			+	o	+	o	+	o			
1900...	M	11	0	4	0	6	0	1	12	1	11
1900...	F	6	0	3	0	3	0	0	5	0	5
1901...	M	23	0	4	1	14	0	4	30	0	30
1901...	F	14	1	2	1	6	0	0	5	0	5
1902...	M	49	0	13	6	29	0	1	30	1	29
1902...	F	16	0	5	0	10	0	1	20	3	17
1903...	M	49	1	23	5	18	0	2	45	3	42
1903...	F	30	1	16	2	11	0	0	32	2	30
1904...	M	41	2	21	1	13	0	4	43	0	43
1904...	F	25	1	9	2	12	0	1	20	1	19
Total.		264	6	101	21	122	0	14	242	11	231

The sign + at the head of a column indicates the number of patients who had further "attacks"; the sign o indicates the number of patients who had no further "attacks."

he had several rigors. At the operation the appendix was found to be ulcerated, inflamed, considerably thickened and occupied by an opaque fluid. It was adherent to the caecum and was not perforated. Surgical emphysema developed round the wound. At the *post-mortem* there was pylephlebitis, with many abscesses in the pancreas, and broncho-pneumonia in the right lung.

The second case was a woman 25 years old, who was admitted with an abscess in the right iliac fossa. She had had no previous appendix attacks. The abscess was evacuated, and ten days later it was necessary to open up the wound again to let out more pus. An opening was then found in the caecum, from which faeces escaped. Twelve days after the first operation she had an attack of acute intestinal obstruction, for the relief of which an artificial anus was made. Twelve weeks after the first operation the fistula leading to the caecum was explored, and an attempt was made to close it. The artificial anus ceased to discharge on several occasions, but was still open at the time of her death, twenty-one weeks after the primary operation. At the *post-mortem* examination there were signs of early lardaceous disease, pylephlebitis with many abscesses in the liver, and pelvic peritonitis with pus between the coils of the small intestine.

The third case was that of a boy, aged 12, who had been ill four days. The appendix, which was gangrenous, was removed. He died three weeks later. At the *post-mortem* examination there was a little local peritonitis round the caecum, otherwise the peritoneum was healthy. The superior mesenteric and portal veins were thrombosed and filled with pus; the splenic vein contained blood and pus.

The fourth case was that of a man, aged 26. He was admitted with jaundice and an enlarged liver. He had had frequent rigors. At the *post-mortem* examination a loculated perityphlitic abscess was found, together with pylephlebitis and abscesses in the liver.

It is to be noted that none of these patients had had a previous attack of appendicitis.

Abscess.

After an appendix abscess has been opened and drained, other abscesses immediately or remotely connected with the appendix may form in various parts of the abdomen. These arrange themselves into three groups:

1. The residual abscess, in which a reaccumulation of pus takes place underneath or close to the operation scar, in the position of the original abscess. Such reaccumulation of pus is not accompanied by signs of another attack of appendicitis.

2. The secondary abscess, which is the result of the direct extension of the inflammatory process from the primary abscess to other parts of the abdomen.

3. The abscess which accompanies subsequent attacks of appendicitis.

Among the 499 cases of appendix abscess there were 11 cases of residual abscess which were opened at intervals after the operation varying from ten days to seven weeks.

There were 12 cases of secondary abscess. Six of these were sub-diaphragmatic (4 being on the right side and 2 on the left). Two were opened three weeks after the primary abscess had been drained, 3 two weeks after, and 1 nine days after.

Five of the secondary abscesses were situated in the pelvis while the remaining one pointed at the external abdominal ring. These were opened from twelve to twenty-one days after the primary operation, with the exception of one pelvic abscess which was opened seven days after.

Finally, in 14 of the cases in which there were further attacks of appendicitis, the attacks were again accompanied by abscess formation. Three of them returned a third time with another attack of appendicitis and another abscess.

Pregnancy.

Among the 1,000 cases of operation were six women who were pregnant. Of three patients who were operated upon for general peritonitis, two were six months pregnant. Abortion took place three to five days after the operation in each case, and all the patients died; one on the fifth day, one on the thirteenth, and the third on the eighteenth day (after an attack of secondary haemorrhage from a vessel in the pelvis).

Of 3 cases who were admitted with an appendix abscess 2 were six months pregnant, and 1 was four months pregnant. One patient aborted ten days after the operation, and another four and a half weeks after the operation; they both recovered. In the third case pregnancy was undisturbed.

The above table shows the result of the investigation into the frequency of further attacks of reputed appendicitis after abscess formation or general peritonitis. It also gives the number of patients who stated that they had attacks of pain subsequently to the removal of the appendix during the quiescent period, "similar to those they had before the operation."

Letters were sent to 797 patients, and replies were received from 506.

Of 264 cases of abscess or general peritonitis, further "attacks" were complained of in 27 cases, or 10.2 per cent.

Of 242 cases of operation during the quiescent period, further "attacks" were complained of in 4.5 per cent.

It will be seen from the table that, of 107 cases of abscess or general peritonitis in which the appendix was said to have been removed, only 6 complained of further "attacks."

In 122 cases in which the appendix was not removed, 21 patients complained of further "attacks."

Sr William Broadbent said that the paper by Sir Frederick Treves turned so entirely on surgical questions that he did not see where the physician came in. The consulting physician was in a particularly unfavorable position in regard to this subject. Patients were brought to him, and perhaps the existence of recurrent appendicitis was recognized, whereupon the patient was handed over to some surgeon, and the consulting physician heard later on whether the result was favorable or unfavorable, but was not supplied with any details. At other times the consulting physician was called in to assist in deciding whether an operation for appendicitis was necessary or not. The best advice was given, and the probability was that a surgeon was called in, operation performed, and the consulting physician heard nothing more about the case. For those reasons Sir William Broadbent thought it would be absurd in him to attempt to contribute in any way to the discussion.

Mr. Charters Symonds said that in a series of 72 private cases, as far as he had been able to obtain the information, the following after results had been observed: In one case there was thrombosis of the left femoral vein; in one case there was cardiac embolism with death on the fourth day; in one case there was mild pyrexia for fourteen days followed by slight haemoptysis; in one case there was a pelvic abscess which discharged into the rectum. Of these 72 cases, 71 were known at the present time to remain in perfect health. In another series of 50 cases from his hospital records, there was no case of thrombosis. Concerning the after-history of these 50 cases, he had been able to trace four cases with after-results. In one, the attacks diminished in severity, but still continued, the pain probably being due to a renal cause; in another case, a surgical operation for fixation of the kidney gave relief, and in another recurrent attacks occurred, but he had not been able to secure the subsequent history. In another case death occurred from acute peritonitis. In addition to the four cases he had mentioned, he had had three other cases under his care in which operations had been performed by other surgeons. In one of these three cases the attack recurred before the patient left the nursing home. Subsequently fixation of the kidney was performed, and he hoped the pain would be cured. The second case was a man of 30,

in whom the pain continued after the appendix had been removed; the pain became localized to the region of the loin, and relief was obtained by removing a stone from the kidney. In the third case the patient was neurotic. In his experience, when recurrent abscess occurred, some part of the appendix had been left, or there was some concretion at the bottom of the abscess. In regard to the question of thrombosis, he was interested to hear Sir Frederick Treves state that it was more common on the left side. It occurred in cases where the wound ran a perfectly healthy course. In looking over his cases other than appendicitis, Mr. Symond said that he found it had occurred after radical cure of hernia in a woman after suturing a petella, after compound fracture of an ankle in the opposite leg and after fracture of the femur. Thrombosis had taken place in those cases after perfect union had occurred and some explanation of the disaster must be sought for. In a certain number of cases where there were septic changes in the wound thrombosis was the result of the septic process, but when thrombosis occurred while the wound was running a healthy course he thought there must be a degree of septic poisoning present, although there were no means of measuring it; in other words, a condition of the blood must exist which tended towards thrombosis. No case, however, of a thrombosis of the femoral vein had come under his notice in a child. Some common factor must exist in these conditions, and he submitted that that common factor was the enforced rest which followed all operations on the abdomen. He advocated movement in his abdominal cases, and he dispensed with pillows placed under the knees; in fact, he directed his patients to move their legs after abdominal operations quite freely. In his hospital case there was no record of thrombosis after appendicitis; it was more common in private practice because of the greater care and the more stringent rest imposed. Referring to the removal of the appendix in acute conditions, he advocated one rule which was perfectly clear, and that was that when the patient was septic, when the temperature was raised, the appendix must be removed, otherwise the source of the infection was left. In cases where there was no septic infection nor elevation of temperature it was justifiable to lay open the abscess, clean it carefully, and drain. The best results were obtained if flushing out was avoided, and the operator contented with dry mopping.

Sir Lauder Brunton observed that in a certain number of cases where pain recurred after the removal of the appendix it was found that the patients were suffering from chronic colitis. In these cases the chronic colitis continued after the removal of the appendix, and the symptoms of discomfort and the pain were so like those produced by appen-

dicitis that the patient usually said that the operation had done little or no good. Many of those cases were benefited, and recovery took place simply by subjecting them to irrigation carried out either at home or at Plombières. Many suffered from a condition of the nervous system which was found commonly associated with colitis; they complained of aches and pains when no definite evidences of anything wrong in the appendix or in the colon could be found. It seemed as if the pain were fixed in their sensorium.

Mr. Pearce Gould said that it was impossible to deal adequately with the mass of statistical matter that had been furnished. He had looked up the records of just over 300 consecutive cases of appendicitis, about half being cases in private practice and about half hospital patients. In the main they conformed very closely indeed to the statements made by Sir Frederick Treves. He could confirm what Sir Frederick Treves said about the difficulty in some cases of removing the appendix and also about the importance of removing the whole of the appendix and how disastrous it might be to leave even a small fragment behind. As to the best course to follow after the patient had recovered from an appendix abscess, whether a second operation should necessarily be advised, he found in his own cases that of 41 hospital cases there was a subsequent return of the disease necessitating an operation in four. Out of 30 private cases he had only known one. If he took the hospital cases, which he thought afforded safer ground on which to make a statement, they showed that just 10 per cent. of cases of abscess that recover after operation were liable to have a return of the disease. Therefore it was better to wait and see if mischief returned before deciding the question of a second operation. In regard to complications, he mentioned that out of over 300 cases there were seven with sinuses, four with faecal fistula, one with femoral thrombosis which affected both veins, and one with thrombosis of the internal saphena vein. Another complication was the formation of a second abscess before the patient had recovered from the first. He had seen eight cases in which that had occurred. He thought that it was an important complication. In one case cerebral softening occurred, the patient being hemiplegic the day after the operation. In one case there was intestinal obstruction, and in another both ovaries had to be removed for suppuration. In two patients he found and dealt with double pyosalpinx at the time of the operation. There were two cases of parotid bubo, one case of acute swelling of the thyroid, three of colitis, and two cases of marked neurasthenia. One point that had struck him was the glib use of the words "the operation for appendicitis," as if there were but one single and simple operation for appendicitis, whereas there

were still three distinct practices. One of these was the removal of the appendix, as in 214 out of his cases. The second was that concerned with the treatment of a localized abscess, of which there were 70 examples in his list. The third was concerned with perforation of the appendix, general infection of the peritoneum, and no limiting adhesions. Studying these three groups separately, he found that among the 214 operations for the removal of the appendix in the quiescent stage, or in the early stages of acute appendicitis, there were three deaths. One death was due to cardiac disease in a patient whom it was known had grave and serious cardiac trouble; he had had three attacks of appendicitis, and still had a swelling over the caecum, and it seemed to those in charge of the case that he should run the risk of having the appendix removed. That patient, however, died from cardiac disease. The second death was in a patient who was suffering from septicaemia at the time of the operation. In the third case acute peritonitis ensued shortly after the operation. In these 214 cases there was a mortality of under two per cent. In the cases of abscess and general peritonitis the mortality was 26 per cent. The statistics of the London Hospital, dealing with a much larger series, gave a mortality of 27 per cent. in cases of abscess and general peritonitis. He emphasized the point that if the case was such that it could be treated by simple removal of the appendix, the mortality was two per cent. But if the patients were allowed to reach the point where an abscess had formed, there was general peritonitis, a mortality of 26 or 27 per cent. was reached. Sir Frederick Treves had referred to the fact that in 1887 he first of all before that society had suggested the removal of the appendix during the quiescent stage. He had mentioned that that proposal was not well received, as Mr. Pearce Gould remembered. If in the treatment of acute appendicitis a general toxæmia was allowed to occur, and if a surgeon was not called in till that had occurred, it ought to be regarded as a reflection on whomever was in charge. Now it was a question whether an abscess of the appendix should be drained, or flushed, or wiped out, and whether the appendix should be removed then or later, but he looked forward to the time when abscess would be prevented, and all would be interested in the more precise diagnosis of appendicitis in the early stages. There was hardly a parallel, so far as the condition was concerned, with what was seen in appendicitis; all agreed to call the disease by that name, and it was in the appendix that the mischief brewed. All were agreed that the appendix could be removed without any detriment to the patient. They were not mutilating their patients by removing the appendix, and the morbid material which led to such grave conditions

was limited at first to the appendix itself. He did not think it was an exaggeration to say that it was as much an error for a surgeon to allow an abscess to develop about a diseased appendix as it was for a dentist to allow an abscess to develop about the fang of a tooth. The mortality of 27 per cent. in the cases of abscess and peritonitis ought to be reduced to the minimum of two per cent. by early operation.

NOTES ON SOME OF THE COMMONER DISEASES OF THE NOSE AND THROAT.

By PERRY G. GOLDSMITH, M.D., O.M., Bellville.

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IT is intended in a running article to take up some of the diseases of the nose and throat most usually met with and write briefly on their causation and treatment. It is not intended that the articles will be complete so far as concerns all the usual remedies, but rather that they will be of interest and profit to those who see such cases during the routine of general practice. Some suggestions will be offered as to what may be advantageously done.

THE NOSE.

Eczema.—Under this heading might be included any irritative condition appearing about the anterior nares. There are usually two forms—acute and chronic. The former is usually associated with acute rhinitis, while the latter is generally found in association with defective nasal drainage. In children, in whom this disease is most common, there is found, in a large majority of cases, a mass of adenoids. Occasionally it is associated with a marked thickening of the upper lip. Small ulcers and fissures are frequently discovered just within the vestibule of the nose.

Treatment.—In children attention to the naso-pharynx is very essential. The removal of a mass of adenoids frequently is all that is required, because the rhinitis rapidly subsides and also the dermatitis. Any septic focus within the nose requires attention, also any abnormality interfering with drainage. Ulcers are best treated by cauterization with silver nitrate 10 per cent. or argyrol 50 per cent. It is particularly important to see that every recess of the vestibule is thoroughly cleaned and disinfected. As a local application an ointment of zinc oxide and bismuth sub-nitrate, 20 grains of each to the ounce of vaseline, will be found of value in the acute cases, while the addition of white precipitate and salicylic acid will be of much greater value in chronic cases.

Collapse of Alæ Nasi.—This condition is not by any means rare, though it is often overlooked. It may alone be the sole cause of nasal obstruction, or remain as the cause of failure after the intra-nasal canal has been rendered patent by operative means.

The treatment of these cases is very unsatisfactory. Mechanical appliances, the injection of paraffin and dilator exercises have all been tried, but have not been of very material benefit. The mechanical measures commonly used by Hill, who has devoted considerable attention to the subject, are a short piece of rubber tubing, a small umbrella ring, or a celluloid expander. Divulsion is sometimes practised, but is in no sense curative. When Roughton's band causes obstruction by constricting the orifice, it does not appear that anything permanent is gained by cutting and subsequent divulsion.

Encroachment on the vestibular area, resulting from abnormalities of the internal or septal wall, is probably more common than the forms we have just mentioned. The commonest form is due to displacement of the lower border of the triangular cartilage. A nostril may be converted into a mere slit, which is completely closed on attempting to inhale forcibly through the nose.

The treatment is entirely operative and yields very happy results. It simply consists in making an incision in the mucous membrane and dissecting it off the protrusion, which is then cut away from its posterior attachments with shears. The mucous membrane is then trimmed so as to sit properly. Sutures are not needed, a collodion and iodoform dressing is applied. Cocaine may be used hypodermically to make the operation painless, but a 20 per cent. solution, used with cotton mops, generally answers quite satisfactorily. Adrenalin in oil makes the field quite clear. A good deal of patience is required in dissecting the mucous membrane, otherwise an opening will be made into the other nostril. This, while it may do no harm, is not desirable. A vestibular occlusion may consist of a strong deflection of the entire extremity of the triangular cartilage, presenting what is virtually a large spur about the situation of the limen (Pegler). This protrusion may be readily removed with a knife. Flaps may, or may not, be used. If, however, the flap operation be used, it will make the operation much more prolonged and difficult, and it is doubtful if any more desirable result is gained.

Haematoma and Abscess of the Septum.—A haematoma may be bilateral or unilateral, the latter being the more common. It usually results from an injury, such as a blow on the nose. The condition, which depends on an accumulation of blood between the mucous membrane and the osteo-cartilaginous framework, may be mistaken for a polypus or a gumma. The tumor may be absorbed or result in an abscess of the septum. If

the tumor is incised, great care should be taken to prevent sepsis. Abscess of the septum, however, is not always preceded by haematoma, traumatism may lead to caries of the bone and cartilage, which may result in perforation and symmetrical suppuration. Evacuation of the pus is then immediately indicated. It is well to bear in mind that the point of least resistance in this case is in the buccal vestibule, inside the upper lip. A knife introduced above the central incisors will readily reach the pus and secure a good drainage.

Perforation of the Septum.—Septal perforations are due to one of two causes: (1) Those following operations, the perforation being effected purposely or inadvertently. They are of little consequence and the patient may not be aware of their presence, unless informed of them. It is best to mention their presence, otherwise, if found out later, great annoyance to both patient and operator may ensue. (2) Those occurring as the result of some dyscrasia are of more importance. Syphilis was formerly considered the usual cause. A perforation due to syphilis is generally accompanied by, or associated with, some necrosis of the ethmoid in addition to the perpendicular plate, and fetor is always present. Strumous people not infrequently have small round perforations confined to the triangular cartilage. Picking the nose to remove accumulations of crusts, or small vestibular or septal spurs often lead to erosions which ultimately perforate. Debilitating illnesses may also cause perforation, such as typhus, smallpox, malignant types of typhoid, diphtheria, etc. Chromic acid and phosphorous poisoning may also be a cause. Sometimes a small round perforation, whose edges do not tend to heal entirely, is found accidentally. Lenox Browne speaks of these as of tropho-neurotic origin. Ill skilled use of the cautery or chromic acid within the nose may produce ulceration, followed by perforation.

Treatment.—Very little can be done for these perforations. They practically never close entirely. Those of constitutional origin require appropriate treatment directed to the underlying disease. Locally, cleansing alkaline and antiseptic sprays, followed by soothing or stimulating ointments, will be found of value. A combination of menthol, gr. ii, and bismuth, grs. xxx, in an ounce of vaseline will be found soothing and softens the crusts; while menthol, grs. iv, and oil of cade, m. vi, will be somewhat more stimulating. Resorcine in vaseline is also of value. Care must be taken, that any habit tending to keep up irritation is entirely stopped. It may even be necessary in those cases which show a tendency to progress to gently touch the edges with silver nitrate, gr. xxx, to the ounce or with the galvano-cautery. With reference to the syphilitic cases, it must not be forgotten that these occur as a rule in the tertiary stages and potassium iodide, pushed to its full physiological effect,

is alone indicated. Ten to twenty grains of pyoktanin to the ounce sterate of zinc is highly spoken of by Kyle as a local application to forms of septal ulceration.

Epistaxis.—Bleeding from the nose is a common complaint and sometimes taxes all the energies of the physician to control it. It has been seen to take place as a symptom, as a disease, and as a physiological process. No attempt will be made here to mention all the causes. Suffice it to say that among the local causative agents, trauma, ulcerations, foreign bodies and new growths will be found to be the most frequent; while, among the constitutional conditions, are found the hemorrhagic diathesis, hæmophilia, typhoid, diphtheria, pneumonia, various anæmias, specific inflammations, congestive conditions of the mucous membrane due to cardiac lesions and Bright's disease, alcoholic excesses and apoplexy also play part. The bleeding is not infrequently started by a severe sneeze, cough or violent blowing of the nose. The point at which the flow begins generally at the anterior inferior part of the septum.

Treatment.—The patient naturally expects some effort to be made to stop the flow, leaving the discussion of the underlying cause for later consideration. In order to plug the nose with any degree of satisfaction and to get prompt results, it is necessary to see, if possible, the bleeding point. Pressure directed to this one spot will usually control the hæmorrhage, and the use of large plugs may not be required, gauze, soaked in hydrocarbon oil, acts much better than gauze or cotton alone. Adrenalin chloride 1-2000, acts rapidly in most cases, if applied at the site of bleeding. Various astringent applications, such as antipyrin, hydrogen peroxide, tannic acid, etc., are also of value. Care must be taken that the plugs are not inserted so tightly that the pressure will cause subsequent necrosis. A small rubber bag inserted into the nostril and then filled with air is sometimes of value. In all cases tinct. opii. in 5 or 10 minim doses, greatly assists in keeping the patient's feelings under control. It is occasionally necessary to plug the posterior nares. Plugs should not be left in more than 24 hours.

The subsequent management of the case consists in the avoidance of excessive exertion and all habits tending to cause the flow to recur. In cases depending on an altered constitutional state require treatment directed to this end. In hæmophiliacs, packing the nostril may fail to arrest the hæmorrhage, yet sufficient cotton should be put into the nose to prevent nasal breathing; as, sometimes where the oozing is slight, the suction produced by breathing is sufficient to keep up the bleeding. Strychnine, opium, and lead acetate may be of service.

FORTY YEARS' AND AFTER—A REPLY TO DR. OSLER.

By JOHN FERGUSON, M.A., M.D.,

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Mr. President and Gentlemen,—A short time ago I was asked by the President to read a paper on Dr. Osler's recent address, at Johns Hopkins University. At first I declined, stating that some older and more experienced member should be chosen for the discharge of so important a task. The request was, however, renewed and this is my excuse for appearing before you on this occasion.

I.—DR. OSLER'S POSITION.

"I have two fixed ideas well known to my friends. The first is the comparative uselessness of men above 40 years. This may seem shocking, and yet, read aright, the world's history bears out the statement. Take the sum of human achievement in action, in science, in art, in literature, subtract the work of the men above 40, and, while we should miss great treasures—even priceless treasures—we would practically be where we are to-day.

"It is difficult to name a great and far-reaching conquest of the mind which has not been given to the world by a man on whose back the sun was still shining. The effective, moving, vitalizing work of the world is done between the ages of 25 and 40, those 15 golden years of plenty, the anabolic or constructive period, in which there is always a balance in the mental bank and the credit is still good.

"In the science and art of medicine there has not been an advance of the first rank which has not been initialed by young or comparatively young men. Vesalius, Harvey, Hunter, Bichat, Laennec, Virchow, Lister, Koch—the green years were yet upon their heads when their epoch making studies were made. To modify an old saying, a man is sane morally at 30, rich mentally at 40, wise spiritually at 50 or never. The young men should be encouraged and afforded every possible chance to show what is in them.

"My second fixed idea is the uselessness of men above 60 years of age and the incalculable benefit it would be in commercial, political and professional life, if, as a matter of course, men stopped work at this age. In that charming novel, *The Fixed Period*, Anthony Trollope discusses the practical advantages in modern life of a return to this ancient usage, and

the plot hinges on the admirable scheme of a college into which at 60 he retired for a year of contemplation before a peaceful departure by chlo form.

"As it can be maintained that all the great advances have come from men under 40, so the history of the world shows that a very large proportion of the evils may be traced to the sexagenarians, nearly all the great mistakes politically and socially, all of the worst poems, most of the bad pictures, a majority of the bad novels, not a few of the bad sermons and speeches."

Subsequently, Dr. Osler remarked as follows:—

"Nothing in the criticism has shaken my conviction that the teller of the work of the world has been done, and is done, by men under 40 years of age. The exceptions which have been given only illustrate the rule."

"It would be for the general good if men at 60 were relieved from active work. We would miss the energies of some younger-old men, but on the whole it would be of the greatest service to the sexagenarians themselves."

"I said that man's best work was done before forty and at sixty should retire."

"No man ought to think of writing a book until he is 40. Up to that time he should be engaged upon other and more important things, concerning what he intends to write about. That is the way it was with me. I was too busy at forty to write."

"Take Darwin as an instance. His greatest work was done when he was a young man exploring South America."

II.—OPINIONS REGARDING DR. OSLER'S VIEWS.

The *London Globe* remarks that "Dr. Osler's views are disproved by the patent fact that a very large proportion of the men who are doing the best work in the world to-day are over sixty years of age."

The *St. James Gazette* says: "We know several men over sixty who will refuse to discuss it, yet five years offer such an opportunity for argument that Dr. Osler may be able in 1910 to die a martyr to his own cause."

President Jas. B. Angell, of the University of Michigan, does not subscribe to the statement that men lose their usefulness when they reach the age of sixty years.

Dr. Henry M. Hurd, President of Johns Hopkins University, says

"It was natural that in making an excuse for leaving Johns Hopkins and going to Oxford he should say that he felt that his work for the University had been finished, and that some one should come to take his place—but there he should have stopped."

"I have known Dr. Osler so long that I have become accustomed to his views. When I first met him some sixteen years ago I was not in the first blush of youth. At that time Dr. Osler was not quite forty and he said that he thought a man's work should cease at forty. After a few years he said no man should attempt to do anything after he had reached fifty. Now that he has passed fifty he says that sixty is the limit, and I venture to say that within a few years he will declare that seventy is not a bad time to quit.

Many of us feel that the address was unfortunate. It is safe to say that when man reaches the limit, and not until then, he advertises the fact by poor work."

"Cato learned Greek at eighty; Sophocles
Wrote his grand "Oedipus" and Simonides
Bore off the prize of verse from his compeers
When each had numbered more than four score years.
And Theophrastus, at four score and ten,
Had but begun his "Characters of Men,"
Chaucer, at Woodstock, with his nightingales,
At sixty wrote the "Canterbury Tales."
Goethe, at Weimar, toiling to the last,
Completed "Faust" when eighty years had past.
Something remains for us to do or dare;
Even the oldest tree some fruit may bear.
For age is opportunity no less
Than youth itself, though in another dress."

In this fashion did Longfellow anticipate and refute the paradox put forward that men should be laid upon the shelf at the age of sixty.

S. E. Kiser, in the *Chicago Record*, among other things says:—

"There's poor old Tolstoi; how unwise and mean his actions are
Compared with those of Nicholas, the glorious young Czar.
How grand the world might be to-day if Gladstone, Tennyson,
Grim Bismarck and great Hugo all had died at forty-one."

Lord Macaulay said in the House of Commons in 1841: "It is the law of our nature that the mind shall attain its full power by slow degrees; and this is especially true of the most vigorous minds. It would be impossible to name any writer of the first order whose juvenile performances were his best. That all the most valuable books of history, of philology, of physical and metaphysical science, of divinity, of political economy, have been produced by men of mature years, will hardly be disputed. The case may not be quite so clear as respects works of the imagination. And yet I know no work of the imagination of the very highest class that was ever, in any age or country, produced by a man under thirty-five. Whatsoever powers a youth may have received from nature, it is impossible that his taste and judgment can be ripe, that his mind can be richly stored with images, that he can have observed the vicissitudes of life, that he can have studied the nicer shades of character. On the whole, I be-

lieve that I may, without fear of contradiction, affirm this, that of the good books now extant in the world more than nineteen-twentieths were published after the writers had attained the age of forty."

The British Medical Journal of recent date editorially remarks:—"Professor Osler's statement that all the best intellectual work is done by men under forty is not by any means borne out by facts. To Dr. Osler's dogmatic assertion we oppose the above equally positive statement by Macaulay an oracle of at least equal authority. This is in accord with the fact—which can scarcely be denied except by those who love paradox more than sober truth—that the intellectual powers do not reach the stable equilibrium of full and harmonious development till the age of forty or even later."

Victor Hugo, no mean mind, said that "Forty was the old age of youth and fifty the youth of old age."

From Robert Browning, the poet, we have the statement that, "The last of life is that for which the first was made."

The Medical Age makes the following comment on the matter "If Professor Osler cannot give us a 'de Senectute' gospel more elevating than that which would decree the old man's insufficiency to be measured by Dr. Osler's conceptions of utility, he had better not have delivered his message."

While making the above quotations I am not forgetful of the fact that Goethe said we get no new ideas after forty, and that Vierordt says the brain attains its maximum weight at 20. But it should be borne in mind that Goethe's whole life disproved his own theory, and that there is vast difference between brain weight and brain development.

III.—SCIENTIFICALLY CONSIDERED.

It must, of course, be conceded to Dr. Osler that as no one can live on indefinitely, a period of decline of intellectual and artistic power must sooner or later set in. His error is in fixing the meridian of creative life too early. If he will give this matter more attention from the pathological standpoint, and cease to depend on statistics which may appear to prove anything while establishing nothing, he will probably add ten or even twenty years to the span of creative activity; he may even see cause to prolong it to the proverbial three score and ten. It is not safe to set definite limits to the capacity for development. That of the mind may go on long after the body has ceased to grow, and may still go on while the physical powers are in steady decline. The objects that interest the artist may vary, and his point of view and method of treatment may change, but all this is quite compatible with increasing excellence of artistic product till a period of life far beyond the limit arbitrarily and hurtfully set by Dr. Osler.

The truth probably is that whatever decay in creative power becomes a noticeable concomitant of advancing age is due not to the advance of age so much as to wrong habits of life. Dr. Osler, as a pathologist, knows perfectly well that the vast majority of people, even those who think themselves all right, are in a pathological, not a physiological condition. So long as they injure themselves by over-indulgence in eating, drinking, sleeping and the use of stimulants and narcotics, it is mischievously unfair to attribute to the infirmity of age the decay that is really due to suicidal practices. The wonder in regard to most persons should be not that they survive with decaying powers, but that they survive at all. For those who persist in living to eat, drinking to enjoy, sleeping to enervate and using whiskey or tobacco to exhilarate or narcotize curtailment of creative power is inevitable at any age, and if the impairment becomes more noticeable after the meridian of life is past, that is largely because the mischievous habits have been longer practiced. Some constitutions can stand more bad treatment than others, but none can escape a check in development, even though loss of power may not be positively predicable.

Dr. Osler is much too careful a scientist to seriously pretend that age is the true measure of existence. The standard is arbitrary and, to group men according to the number of years they have been in the world is no more scientific than to group them according to their weight, or their height, or to reckon the world's progress by centuries. Doctors themselves discovered this long ago, and set up the arterial standard. "Man is as old as his arteries," they said. In our everyday wisdom we have the proverb, "A man is as old as he feels, a woman as old as she looks." We hear much about "young old men," and "old young men," paradoxes well understood. Dr. Osler is aware of this, and also of the famous poetical passage which tells us that life is not measured by years, but by deeds, and thoughts, and aspirations. This is sound science and good poetry.

But it seems to us that the radical fallacy of Dr. Osler's doctrine is shown by something that he looks upon as confirming it. He holds that up to the age of forty a man should devote himself to acquiring knowledge as to matters of fact, and that not until after that age should he attempt to generalize. Observation, then according to him, is the proper pursuit of a man at the height of his powers, while deduction is allowable only when he has begun to degenerate; in other words, the acquisition of knowledge calls for mental powers superior to those that suffice for systematizing that knowledge and employing it as a basis for teaching and for the formation of theories. The senses, in other words, are higher than the intellect. There are some of us who think it a higher intellectual function to make the best possible use of recorded observations

than to do actual laboratory work. From this point of view and from that of their tendency to discourage middle-aged men, we think that some of his remarks are to be regretted.

It is a well-known fact that the mind and the body do not always develop simultaneously. Nestor complained that the gods do not bestow the wisdom of years until they have withdrawn the vigor of youth. Along this line there are so many exceptions, however, that in a hundred examples, probably 45 would contradict the evidence offered by the other 55. We can well imagine some one urging that 51 per cent. constitutes a rule, and that 49 per cent. must be reckoned as an exception. Failing to dislodge him from this position, we might be obliged to admit that 51 out of every hundred men are declining at 40 and becoming of reduced economical use at 60.

There are marked differences as to the age at which people attain their mental development. Gladstone, Carlyle, Weierstrass, are instances of the highest types of mental development coming late. They ripened slowly, but remained at their prime a long time. The meaning of this is plain. Some men are at their best at thirty, some at forty, some at fifty, some at sixty and over. And it is not hard to find a reason for this. The laws of heredity and the environments of any person make for great differences in his vigor, development and longevity. Social conditions also play an important role in a man's life-history. Furthermore, we must not forget the remarkable influence of opportunity or circumstances. The country churchyard may contain mute Miltons and unknown Cromwells. Oyama's day came because of Russia's wrongful aggressiveness. So in the world of arts, sciences and letters the finest fruits may not be borne until late in the autumn, because, figuratively, of an unfavorable spring and summer.

IV.—PRACTICALLY CONSIDERED.

There is one aspect of Dr. Osler's address that merits attention and praise, namely, the credit he gives young men for what they are doing and the encouragement thrown out by him to inspire them to even greater achievements. He has always been pre-eminently the young man's friend, and has done much to discover and bring forward many a bright young man. In this regard Dr. Osler's work will remain a precious legacy long after he is gone. A man's influence over others is sometimes of far greater moment than anything he may actually do himself, as in the cases of Thomas Arnold and Edward Thring.

With regard to old men, however, the case is different. There are hundreds of thousands of men in America at and beyond the sixty year period who are still in active life and forced to remain there by inexorable circumstances. Many of them have to fight to keep their place in the

ranks and prevent themselves from being crushed to the wall. They feel that it is a cruel fate that requires even greater exertion of them at a time when they are less able than in early manhood to work. Several men of this class, reading the distorted view presented by Dr. Osler's words, have committed suicide, the connection between their action and the doctor's address being shown by press clippings. Such a case was that of an aged scientist in St. Louis recently, who chloroformed himself after discussing the whole question of the uselessness of old men. Dr. Osler would, we feel sure, be the last person in the world to make more difficult the task of the old man in factory or workshop or at the clerk's desk, toiling for bread for himself and his loved ones. We cannot all retire at sixty. Wisdom comes with age. The old man has earned the right to continue to earn his living. An opinion coming from a physician of such high standing as Dr. Osler is bound to carry much weight with it.

Since David wrote the Psalms the world has passed through the greatest struggles for existence in its history, and every day the struggle is growing more intense. Medical science may be able to lengthen a man's years, but industrial competition is surely pushing the hands of the clock ahead on the dial of a man's career. The men who, like Gladstone, develop late in life, find the struggle fiercest in their youth; the men who develop early, and these are a majority, find it in advancing years. In this respect it may be that Dr. Osler's words have done much harm; for while he spoke as a humanitarian that men of sixty should retire, it may only have the effect of making it still more difficult for the old man to keep his place in the stern struggle for an existence, and thereby add another burden to those brought to him already by reason of his years.

V.—HISTORICALLY CONSIDERED.

The world will ever marvel at the remembrance of Gladstone's fight for Home Rule in Ireland after he had passed eighty, of Von Moltke's crushing victories against Austria when he was a sexagenarian, and against France when he was a septuagenarian. Bismarck was fifty-two when he organized the North German confederation, fifty-six when he saw its culmination of success with the crowning of the King of Prussia as German Emperor, and seventy-five when he resigned the reins of power.

Johann Kepler was fifty-nine years of age when he announced his discovery of the distance from the planets to the sun; Bacon was fifty-nine when he published "Novum Organum"; Gassendi was fifty-eight years old when he published his atomic theory, and Newton was forty-four when he published his law of gravitation, and older when he wrote his Principia.

Dealing with the rather surprising claim that if the work of men more than forty was subtracted from the world's record we should be

practically where we are, let us give a few contradictory examples. Among statesmen, Gladstone, Bismarck, Palmerston, Salisbury, Chamberlain, Burke, Chatham, Washington, Peel, Grey, Lincoln, and Sir John Macdonald were more than forty when their greatest work was done. Caesar, Cromwell, von Moltke, Lee, Grant, Marlborough, Nelson, Wellington, Blücher, Farragut, Roberts, Campbell, Kitchener, Nogi, Kuroki, Togo, Nodzu and Oyama are warriors in this category. The same is true of Shakespeare, Milton, Goethe, Carlyle, Dryden, Scott, Voltaire, Flaubert, Newman, Macaulay, Gibbon, Tennyson and Hallam among great writers; while among scientists we might name, Spencer, Darwin, Newton, Jenner, Faraday, Avebury Galileo, Tycho Brahe, Fulton, Kepler, Brewster, Copernicus, Huxley, Humboldt and Kelvin as falling beyond the comparatively useless line. Columbus was fifty-six years old when he discovered this continent, and Washington fifty-seven when he became President. Captain James C. Cook met with an untimely death at the age of fifty-one while conducting his third voyage of discovery among the Pacific Islands.

If we may accept Scriptural testimony in a purely scientific discussion, we know that in the days of the prophets there were many men who lived to an extreme old age, and whose natural strength was not abated. Some thousands of years later, the Psalmist said, "The years of a man's life are three score and ten." We have some reason to understand that he meant the useful years. At the present moment great events are transpiring in the Far East. The leaders of Japan, the Emperor, Marquis Ito, Admirals Togo and Kamimura, Marshal Oyama, and Generals Nogi, Kuroki and Nodzu, nine in all, average sixty-one years. These men are brilliant in a very high degree, both in initiating plans and in carrying them to successful completion.

We do not believe that Dr. Osler is correct in this matter and are quite sure that the examples of the medical men he adduced as illustrating the tenability of his position do not bear him out in the least. When we recall the tremendous importance commonly attached to the work done by Virchow up almost to the very end of his long life, we cannot admit that it illustrates such a belief. As for Bichat, it is true that he did his work while he was young, for at thirty-one he died, and we shall never know what he might have accomplished had he lived to old age. Harvey was born in 1578 and published his work, "*Exercitatio de Motu Cordis et Sanguinis*," in 1628 when he was fifty years old. Lister was born in 1827, and was close on to fifty years of age when he began to convert the medical world to the principles of antiseptic surgery; and while Koch was born in 1843,

and was within one year of forty when he discovered the tubercle bacillus, even the least appreciative of his admirers will admit that he has done some good work since 1882.

Darwin published his "Origin of Species" at fifty, and his work on moulds at seventy-two, the year before his death. John Hunter was sixty-five when he died. He rose from a meeting in St. George's Hospital and died suddenly of angina, from which he had suffered for twenty years. The last twenty years of his life were very active ones. He was fifty-seven when he made the experiment of tying the stag's carotid, and fifty-eight when he tied the femoral artery to cure a popliteal aneurism. All these added to the sum of human achievement long after they had passed the dead line of forty years old. Dr. Osler published his first medical book when he was forty years old, and Dr. George M. Gould, the accomplished editor of "American Medicine," did not enter the medical ranks until he was forty years of age. Andreas Vesalius died at fifty, thus his brilliant career was cut short, and much that he might have done has been lost to the world. His great work, however, was accomplished in his last ten years. Laennec, the distinguished physician, pathologist, anatomist and inventor of the stethoscope, died at the young age of forty-five. And after death "no man worketh."

It is difficult to try to refute by statistics of greatness or of genius that he is wrong, because when examples of the manifestation of artistic power in advanced age are cited it is open to him to answer, at least plausibly, that the exception proves the rule. In spite of the multiplication of such instances he may still be able to assert that for all practical purposes the creative activity belongs to the period before forty, even when its manifestations are delayed till after that period of life.

One rejoinder to this would be that in case of the great poets like Shakespeare, Goethe, Browning, and Tennyson—and poetry is perhaps the supreme criterion by which to test the theory—their best work was not done before forty, but after it, and that it continued to improve as to the higher qualities so long as they continued to write. No competent critic would postpone Shakespeare's "Tempest," written when he was nearly fifty, to any of his earlier productions as a work of creative genius; or prefer "Locksley Hall" to "Locksley Hall Sixty Years After." Shakespeare, greatest of all literary artists, voluntarily ceased writing at forty-nine, but there is no reason to doubt his work would have continued to improve with experience and practice if he had chosen to continue it for another twenty years of healthful life. The same statement, *mutatis mutandis*, would hold good of the great historians, the great scientists, and the great philosophers. In short, it is impossible for Dr. Osler to establish by any induction, however wide, that his theory is even presumptively sound.

Longfellow when he wrote his "Morituri Salutamus," from which we have quoted and which is regarded as equal in merit and popularity to anything he wrote in his youth. The greatest of all Browning's poems, "The Ring and the Book," was published when he was in the sixth decade, and some of his most characteristic verse was produced in his eighth. Tennyson's rich and tender insight into the spiritual life of the soul was with him still as an octogenarian, notably in that exquisite lyric, "Crossing the Bar," in that wonderful dramatic idyl, "Rizpah." Then there is Milton at sixty completing his "Paradise." If Carlyle had died at forty, we would only have some essays and "Sartor Resartus" to know him by, as most of his essays, "Heroes and Hero Worship," "The French Revolution," "Cromwell," "Frederick the Great," and "Past and Present" were written between forty-five and seventy.

Dr. Johnson conducted the Rambler, the Adventurer, and the Idler from the fiftieth to the sixtieth year of age. His dictionary was published when fifty-five, a phenomenal task in his day, when seventy-five he made his trip to the Hebrides, and when seventy-seven published his master-work, "The Lives of British Poets." Adam Smith gave to the world his "Wealth of Nations" when fifty-three, and continued for many years to do excellent work.

Kant began the study of his immortal work, the "Kritik der reinen Vernunft," when fifty, and published it when fifty-seven. He brought out a second edition when sixty-three.

John Locke, the physician philosopher, wrote his essay on the human understanding between 50 and 58.

The two physicians and the three surgeons who attended the King when operated upon for his attack of appendicitis varied in age from fifty to seventy-five, averaging over fifty-eight, and were all actively engaged in professional or state duties.

Lord Howard, Sir Francis Drake, Sir John Hawkins, Sir Martin Frobisher, Sir Walter Raleigh and Sir Richard Grenville, the six men who commanded the English Fleet against the Spanish Armada, varied in age from 36 to 68, making an average of 51. They all continued to render great services to their country for years afterwards.

But why extend the list of names? Such works as the encyclopedia Britannica, Dictionaries of Biography, "The English Men of Letters" series, "The Eminent Statesmen" series, Plutarch's Lives, etc., etc., yield not hundreds but thousands of instances of men at fifty, sixty, seventy, and even eighty, performing great tasks and doing splendid work.

I have examined somewhat carefully the achievements of about 500 distinguished poets, historians, critics, mathematicians, scientists, explorers, warriors, statesmen, inventors, orators of many countries and of

different periods from the dawn of history down to the present, and find that about seventy-five per cent. of their best work was given to the world after forty years of age. In coming to this conclusion I take it that the mental operations of Galileo, Brahe and Kepler on the laws of astronomy, of Kant in writing his *Kritik*, of Smith in composing his *Wealth of Nations*, of Wellington at Waterloo, of Kelvin in laying the Atlantic Cable, of Roberts in South Africa, of Salisbury as Premier of Britain, of Darwin formulating the origin of species, of Pasteur in his laboratory, of Lister preaching antiseptic surgery, of Treves at the bedside of the King, are not less important or valuable than their studies and trainings which laid the foundation for these achievements; and I think the consensus of opinion is with me.

A MATERNITY PACKET. *

A. G. ASHTON FLETCHER, M.D., C.M., F.T.M.C.,

Obstetrician to the Western Hospital, etc., etc.

MR President and Gentlemen,—I would give you an apology for taking up the time of this Society on a subject so simple, were it not that its very simplicity causes it to be passed over as one of small importance. That it is not so, can be abundantly proved by any of you who do obstetrical work if you will ask your next ten cases to provide themselves with some such Packet as I am about to describe. All will deluge you with why's and wherefor's, eventually adopt your suggestions and pass through one of the most comfortable accouchments for both patient and attendant.

In these modern days of general education in hygiene, the majority of our patients have more or less knowledge of antiseptics; true, it may be erroneous or crude, but they will accept and readily enter into the few processes necessary to prepare the materials for the Packet; and thus enable us in private practice to work under more favorable conditions than heretofore have existed.

A Maternity Packet then is a packet the contents of which are provided by the patient for the use of herself, babe and attendant during and after labor. Two considerations confront us at the outset in making this preparation: First, the cost which must be brought within the means of the patient, and yet not at the expense of the second, namely, usefulness.

* Read at Toronto Medical Society, 16th March.

I shall first enumerate the articles required for the packet and then describe the manufacture and application of those requiring any work from me.

Contents of the Packet:—(1) Sheets, 3 to 16; (2) Towels, old and soft, 6 to 12; (3) abdominal binders, 2 or 3, $1\frac{1}{2}$ yards by 24 inches or more; (4) Obstetrical pads, 2 or 3, 20 inches by 20 inches; (5) Vulva pad 24, 12 inches by 3 inches; (6) stockings, long, 1 pair; (7) Night dress 2; (8) Safety pins, 3 doz., 2 large, 1 small; (9) Absorbent cotton, at least half lb.; (10) 2 hand basins, enamelware preferred; (11) 1 nail brush wooden backed; (12) Lysol, synol, or 1 cake of H. & H. soap; (13) Rubber sheet, enamel cloth, or papers; (14) Talcum powder, and 2 puffs, of stearate of zinc; (15) 4 oz. olive oil; (16) 4 oz. Sol ac boric; (17) Some pieces of old cotton or linen, 12 in number.

The sheets should be sterilized where that can be done by the nurse and put away after being wrapped up and labelled. Where no trained nurse can be afforded, the patient should wash and iron dry the sheet and, after wrapping up in three thicknesses of newspaper, put them in a hot oven and leave till the outer paper is charred. This will render them practically sterile and will be much cleaner than those articles usually provided by patients of such a class which are usually dirty sheets kept to save two washings.

The towels should be treated in like manner and are for the use of attendant during the labor.

The abdominal binder has been dispensed with by some, but is a great source of comfort to the patient after her labor. It should be made of new factory cotton, unbleached, $2\frac{1}{2}$ yards will make two and the excess width can be cut off or turned in at the time of using. You will notice that I have not provided any T bandages or menstrual bandage. I much prefer to have the binder pinned on so far down the thighs that the Vulva pad will be retained in position without any pinning or bandage to hold it. In this way it cannot become a perineal strap to hold the binder down, as the binder cannot slip upward over the hips, and also it does not cause painful pressure on the perineum, retarding union in case of laceration. A third advantage of the wide binder is the freedom of movement the patient can enjoy without fear of the stitches in a laceration being put upon a strain.

Vulva pads may be purchased or made. The sanitary vulva pads of Johnson & Johnson are well made and good, or the patient can improvise for herself by buying 3 yards of cheesecloth and boiling it in water to which a tablespoonful of washing soda has been added, for half an hour and, after rinsing in water which has already boiled and been

strained, putting them on again for half an hour's boiling in some more boiled water. Then wring dry with clean hands and baked in like manner to the sheets and towels.

Obstetrical pads are prepared at the same time, 2 yards of cheesecloth are needed for these and, after drying, but before baking, they should be made by filling 1 inch thick with cotton batting, not absorbant, quilted or tied down, and then the whole baked.

Stockings and night dresses, washed and ironed, then baked, are for the labor—the second dress for use in case the first becomes soiled.

The absorbent cotton should be sterilized and will be used to make the vulva pads when they are required and as needed, the one removed being burned. The nurse will sterilize her hands then open the package of cheese cloth and cut off a piece 12 inches by 7 inches within this she will fold some absorbent cotton and at once apply the pad thus made.

The safety pins, hand basins and nail brush need no word from me.

Lysol, synol, or H. & H. soap. Personally I prefer the H. & H. soap and have half the cake dissolved in two quarts of water and put in 2 quart jars (self sealers). This soft soap is in the form of a jelly and makes an excellent lubricant for the examining fingers, for the washing of the vulva and later on, will remove the vernix caseosa better than the olive oil and soap which I have put in for those who use lysol or synol and the oil.

Rubber sheet. This should be at least one yard square, it is a luxury for some and absolutely beyond the means of many. These can be accommodated with the thin enamel cloth found on the kitchen tables, or four or five evening newspapers or wrapping paper spread over the bed under the sheet and one of the obstetrical pads will answer just as well.

Lastly, the pieces of old cotton or linen are to wipe the eyes and mouth of the babe when the head is born, and will also be found useful in placing as a pad over the anus during the birth of the head. For even after an enema and with the bowels moving regularly, one frequently finds that little pieces of hardened faecal matter are brought down by the advancing head.

One word more. I have overlooked the two powder puffs, and someone will ask, why are two necessary? Let me answer: One is for the neck and ears of the body; the other, which should be larger and of a different color, is for the buttocks and thighs.

THE CANADIAN SOCIETY FOR THE PREVENTION OF TUBERCULOSIS.

By E. J. BARRICK, M.D., C.M., Toronto.

THE fifth annual meeting of the Canadian Society for the Prevention of Tuberculosis was held in the Railway Committee-room of the House of Commons on 15th March. The gathering was largely attended by medical men from various parts of the Dominion.

Senator Edwards, president of the association, occupied the chair. He opened the proceedings by congratulating the association on the large attendance at the meeting. This showed the great interest taken in the work. This year it was thought better to have just a business meeting, and next year a large convention, occupying two or three days. He referred to the resolution moved by Mr. Perley in the House of Commons to the effect that the time had arrived for the Government to take up this great question. The resolution had met with warm approval. A similar resolution will be offered in the Senate.

Rev. Wm. Moore, the secretary, in his annual report, after saying that Earl Grey shortly after his arrival in Canada had accepted the place of honorary president, set forth that in accordance with the resolution passed at the last annual meeting, a large deputation from all parts of Canada waited upon the Dominion Government with reference to the establishment of a sanatorium. They were presented by Senator Edwards. The Premier expressed his pleasure at meeting them, and his sympathy with their objects. The sub-committee which was appointed, with Dr Bryce as convenor, with the object of getting County Councils and other public bodies to petition for the establishment of a sanatorium in each province, to be assisted from the Federal treasury, has met with gratifying success. Twenty-four petitions to the Governor-in Council have come from British Columbia alone. The matter has been warmly taken up in Manitoba, many places raising money for the establishment of a sanatorium in that province, hoping, of course, for some help from the Dominion Government. The British Columbia Association for the Prevention of Tuberculosis and the association of Colchester, N.S., were admitted to affiliation. During the year the secretary delivered 14 lectures in Ontario, 11 in Prince Edward Island, 9 in Nova Scotia, and 2 in New Brunswick. An attack of illness prevented him from continuing the course. He also lectured before the Lanark County Public School Teachers' Association, and the Eastern Ontario Dairyman's Association. During the eleven months to March 1st the literature distributed amounted to 785,000 leaves. The resolution offered by Sir James Grant last year in favor of a medical inspection of children in the schools, was sen

to the Ministers of Education of the different provinces, but no indication has yet been received of any intention to take action.

The report from Colchester, N.S., showed that an association was formed there on Jan. 5th, 1905, and has aroused widespread interest. Observation seems to show that tuberculosis is much more prevalent in Colchester and vicinity than the average for the whole Dominion. The death rate from tuberculosis in that county is one in five.

The treasurer's report covered the eleven months ending on March 1st. Its receipts showed cash on hand \$1,199.73; membership fees, \$13; life membership fee, A. W. Fleck, \$50; Dominion Government grant, \$2,000; collected in small sums at various places, \$182.85; total receipts, \$3,445.58. The expenditures were \$2,513.12, leaving a balance on hand of \$932.48. The treasurer congratulated the association on this showing. He did not know any association that got so much work done for so small an expenditure.

Mr. F. A. Lawrence, M.P. for Colchester, N.S., said a few words, pointing out that Nova Scotia was the first and as yet the only province to have a provincial sanatorium. It was modest but it was a good beginning.

Dr. Adami, of Montreal, reported on behalf of the branch in that city. He spoke of the tuberculosis dispensary which has been established there, and which is doing excellent work. He also praised highly the City Council for its grant of \$700, and for the subsequent assistance given by it, as well as its action in appointing one of its health inspectors as the special inspector for the association. During the year several thousand wall cards have been distributed, giving instructions as to the conduct and care of people with tuberculosis and the means of preventing it.

Dr. Barrick said that good progress was being made in raising by private contribution the \$25,000 which must be secured before the \$50,000 voted by the municipality becomes available. He hoped that a municipal sanatorium would be a reality in Toronto before long.

It was moved by Sir James A. Grant, seconded by Mr. George H. Perley, "That, whereas, the following resolution was agreed to unanimously by the House of Commons on 20th February, 1905, viz. :—

" 'That in the opinion of this House the time has arrived when Parliament should take some active steps to lessen the widespread suffering and the great mortality among the people of Canada, caused by the various forms of tuberculosis.' "

"It is hereby resolved that this association do now and hereby respectfully petition the Dominion Government to take such action as may be expedient to constitute a Royal Commission with authority to enquire

into and report upon what active steps should be taken to lessen the widespread suffering and the great mortality among the people of Canada caused by the various forms of tuberculosis.

"It is further resolved that a special committee be appointed by the Executive Council of the association to forward this matter."

Sir James Grant had no doubt that the resolution would receive the closest possible attention from the Government. There were 8,000 deaths annually in Canada from tuberculosis, and the subject was evidently one in which the Government should take action. Sir James alluded to the great work done by the association during the past five years, and expressed strong hope for its future.

Mr. George Perley, M.P., for Argenteuil, seconded the motion. He said that the Executive Committee had come to the conclusion that the best way of getting at the matter was simply to ask the Dominion Government to appoint a commission to interview the authorities of the different provinces to see what they will do, and what form the co-operation between the provinces and the Dominion should take. His impression was that the Government would not take the initiative in doing anything whatever, but would have to be prompted and pushed to it. The sympathy which the movement had received from the members of the House of Commons was greater than its best friends had expected.

Prof. J. W. Robertson referred to the demand made by the Government in the House for a definite scheme as a condition of assistance. He thought that the commission that was asked for might succeed in drawing up such a scheme.

Dr. Sheard, Medical Health Officer of Toronto, remarked that dealing with consumption was an expensive matter, and for that reason municipal and other bodies had sometimes a tendency to shoulder it from one to another. The problem of dealing with a consumptive who was poor was serious. Thus far one result secured by the dissemination of literature was to spread just about enough knowledge to frighten people, and to cause the consumptive to be more or less ostracized. To deal with consumption properly it was necessary to know what the Government of the Dominion would give, what the provinces would give, and what would be done by the municipalities.

Some remarks on the subject were also made by Dr. Rutherford, Dr. Hodgetts, Ontario Provincial Health Inspector; Dr. Third, professor of medicine at Queen's University, and Drs. Noble and Barrick, of Toronto.

The resolution was adopted.

Senator Edwards was re-elected president, and Mr. J. M. Courtney was re-elected honorary treasurer. The following Executive Committee was selected:—Bishop Hamilton, Ottawa; Dr. Charles A. Hodgetts, Toronto; Dr. Adami, Montreal; Dr. Lachappelle, Montreal; Dr. Bo

ford, Moncton, N.B., Mr. F. Lawrence, M.P., Truro; Dr. J. G. Toombs, Mt. Stewart, P.E.I.; Dr. Gordon Bell, Winnipeg, Man.; Dr. J. D. Lafferty, Calgary, N.W.T.; Dr. C. J. Fagan, Victoria, B.C. Rev. William Moore was re-appointed secretary.

His Excellency the Governor-General, the honorary president, will appoint ten more members of the Executive Committee. The honorary vice-presidents are Sir Wilfrid Laurier, Lord Strathcona, and the Lieutenant-Governors of the provinces.

A large and fashionable audience assembled in the Normal School in the evening to hear the lecture of Dr. Adami, pathologist at McGill University, on tuberculosis. Earl Grey presided, and announced his hearty sympathy with the movement. He urged Canada to try and take the lead in banishing tuberculosis from its midst.

Prof. Adami's address was a scholarly one, and abounded in details of the latest medical discoveries bearing on the question. In the course of his remarks he said that tuberculosis was a preventable disease, and cited the remarks of his Majesty the King to the International Congress in London, "Why not prevent it?" Although in some cases the tissues did not seem to have any resisting power, tuberculosis was by no means progressive. Out of 139 post-mortems performed by his department there were eighteen cases in which tuberculosis assumed a progressive character, and had assuredly been the cause of death. In 41 cases there was absolute evidence that the disease had been arrested, and had seemed to heal. The evidence was all against the idea that human tuberculosis could be given to cattle. Where tuberculosis passed from cow to cow for a long period it became more virulent to cattle and less and less virulent to man. We had not so much to fear from milk containing the bacillus, but there was danger where young and weakly children were concerned. The danger in regard to milk containing tuberculosis-bacilli was there, but it had been exaggerated. Dr. Adami suggested the stamping out of bovine tuberculosis, beginning with Prince Edward Island.

A vote of thanks to the distinguished lecturer was adopted on motion of Sir James Grant, seconded by Dr. Sheard, and in replying Dr. Adami made it clear that milk containing bacteria of any kind should not be drunk. The Governor-General was thanked for his presence and sympathy in a resolution moved by Hon. S. Fisher.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

MAGNESIUM DIOXIDE.

In *Southern Medicine*, February, Fitch calls attention to the value of Magnesium Dioxide in the treatment of rheumatism and diabetes. It is given in five grain tablets every four hours, and in three cases of rheumatism and in one of diabetes which he cites it was attended with very marked success. He believes that its value depends on its ability to convey oxygen to the tissues.

INJECTIONS OF GAS FOR THE RELIEF OF PAIN.

In the *Journal des Sciences Medicales de Lille*, February, Prof. Desplats describes a method employed for the relief of pain by the injection of gas into the cellular tissues in the region. Air is used, as experiment has shown that the result is not increased by use of vapors such as those of chloroform, ether, etc. An ordinary apparatus is used, the air being filtered and the amount injected depending on the position and severity of the pain, enough being injected to distend the tissues into a bulla, which disappears on massage after a short time. No inconvenience is experienced and the relief is usually instantaneous but care must be used to avoid injecting a vessel. The affections which have been successfully treated in this way include sciatica, intercostal neuralgia, lumbago, arthralgia, etc. The explanation of the result is not very clear.

BASEDOW'S DISEASE.

In the *Medical Fortnightly*, February 10th, Lademann has an article on this malady, and the result of the treatment of a severe case by the method suggested by Lanz in 1894. Lanz believed that in thyrotoxic cachexia a poison circulated in the economy which under normal conditions is neutralized by the thyroid secretion, and the secretion of thyroid, if used in Basedow's disease might have an antagonistic effect.

effect on the poison of this affection. This prompted him to feed those suffering from exophthalmic goitre with the milk of "thyroidectomised" goats. The result was favorable and others had similar success, but the method has not gone beyond the experimental stage. The writer believes that his was the first case in which the treatment was used on this side of the Atlantic. The condition of the patient and the effect of treatment is summarised as follows:

General condition, one of emaciation; slight mechanical dyspnea, moderate anemia, an anxious and staring expression, weight 96 pounds.

Eyes: Considerable ocular protrusion, particularly the left eye; exquisite v. Graefe and Stellwag symptoms (one lid closure about every 90 seconds), Möbius symptom (internal rectus insufficiency) not present.

Neck: Contour greatly altered, both thyroid lobes considerably enlarged, the enlargement of left lobe greatly in excess. A pronounced pulsation of struma was visible. Circumference 39 cm.

Thorax: Lungs negative. In the precordial area a diffuse pulsation. The apex beat not circumscribed. A slight dilatation to the right and left on percussion. Auscultation revealed a blowing systolic murmur over the entire cardiac area, most pronounced at the base. No accentuation of sounds.

Pulse: Wave small, though equal, regular, and rhythmic. Arterial tension diminished. Pulse rate 165 per minute.

Nervous system: Reflexes considerably increased. A fine oscillatory motion of the fingers when abducted. (Marie symptom.) Pronounced choreiform movements of upper extremities. No disturbance in sensation.

Vasomotor disturbances: The entire body presented a moist condition. Vigoureux symptom positive. (Increased electric conductivity of the skin, due to increased moisture.)

Urine not catheterized; specific gravity, 1016 reaction acid, a trace of nuclealbumin and serum albumin; indican not increased. Sugar, acetone, diacetic acid, peptones, etc., absent. An alimentary glycosuria upon the changes: Between May 9 and 16, large doses of bromids were given internally without effect. Loss in weight during this period, 2 pounds (weight 94 pounds). Pulse, 160. May 16.—Thyroidectomized goat's milk used (3 pints daily). Other medicines discontinued. May 27.—Condition improved. Patient less excited, diarrhea somewhat decreased, appetite improved, no choking spells. Weight increased 4 pounds (98 pounds). Pulse, 135. June 3.—Condition considerably worse. Patient received only one quart of milk the entire previous week. Diarrhea very severe, frequent attacks of choking spells. Weight decreased 2 pounds (96 pounds). Pulse, 155. June 10.—Condition bet-

ter. Diarrhea less severe, appetite good, sleeps well, less excitable. Weight increased 3 pounds (99 pounds). Pulse, 130. Exophthalmos and goitre unchanged. June 20.—Condition greatly improved. Patient able to indulge in moderate exercise without fatigue. Diarrhea has disappeared, tremor considerably lessened. Choreic movements have almost entirely disappeared. Appetite, sleep, etc., good. Weight increased 4 pounds (103 pounds). Pulse, 125. Neck, 38 cm., exophthalmos conspicuously less. June 27.—No more diarrhea, no choking spells. No complaints of any kind. Weight increased 2 pounds (105 pounds). Pulse, 120. July 5.—Fully able to do all kinds of domestic work. No complaints whatsoever. Weight increased 1 pound (106 pounds). Pulse, 120. July 11.—Condition excellent. Weight increased 2 pounds (108 pounds). Pulse, 130. July 23.—On the day previous to her visit she had diarrhea, which lasted 12 hours (probably due to an error in diet). Weight increased 1 pound (109 pounds). Pulse, 145. August 1.—Weight increased a half pound (109½ pounds). Pulse, 118. Neck, 36. A return of the menses during this week. Hemoglobin, 60 per cent. Leucocytes, 4,080 per cmm.

The case is an interesting one and the method of treatment one apparently worthy of trial. Parke, Davis & Co. supply the milk in a desiccated form in 5 grain tablets.

OPIMUM IN DIARRHOEAL DISEASES.

Crandall gives the following contraindications to the use of opium in diarrhoeal diseases: 1. In the early stages of an acute attack, before the intestinal tract is cleansed. 2. When the passages are infrequent and of bad odor. 3. Where there are high fever or cerebral symptoms. 4. When its use is followed by an increase of temperature or by more offensive passages. It is indicated: 1. In cases with frequent painful passages. 2. When the discharges are large and watery. 3. In dys stages of a diarrhoea, when the discharges are small, frequent and nagging. 5. When there is lientery, the food passing undigested soon after ingestion.

A DIET TABLE FOR USE IN INTESTINAL DISEASES.

Swallow nothing that has not been either passed through a sieve or has not been so thoroughly masticated in the mouth that it is of the consistence of cream, and would readily pass through a sieve without

leaving any remainder. To avoid all skins, bones, strings and stones. Where these things cannot be removed from the article, such diet must be rejected; skins of fruit, of grapes, peaches, apricots, gooseberries, marmalade. Reject currants, raisins. Skins of vegetables, tomatoes, potatoes. Reject peas, beans. Skins of fish of all kinds. Reject sardines, whitebait. Skins of fowl—fowl, game, larks, quails. Bones of fish, sardines, herrings, trout. Reject whitebait. Strings in fruit—oranges, peaches, apples, pears, bananas, tamarinds, mangoes. Strings in vegetables, asparagus, cabbage, cauliflower. Reject carrots and turnips unless mashed and passed through a sieve. Strings in meat—stringy fibres of beef, sinews in larks, quails, fowl and game. Stone or seeds in vegetables—tomatoes. Avoid peas and beans unless most carefully chewed. Stones or seeds in all kinds of fruit—grapes. Reject nuts, almonds, strawberries, raspberries, currants. Strawberries, raspberries or currants may be pulped either alone or with sugar or cream, and may be passed through a fine sieve. The juice thus obtained may be taken either alone or with farinaceous food.

Patient may have milk with soda water or lime water, or even alone if sipped and eaten with rusk or biscuit, and well minced in the mouth. Bread, if stale; new bread to be avoided. All bread that breaks down under the finger and thumb into crumbs is old enough. Bread that under the pressure of the finger makes a stiff dough must be avoided. Rusk or biscuit, or cracker or bread and butter (not crust), provided it be well chewed in the mouth, so that it is of the consistence of cream before it is swallowed. Eggs in any form except hard boiled or fried. Generally the patient may have anything (fruit, vegetables, meat, fish or game) that has been passed through a sieve. All kinds of corn flour, tapioca, sago, rice, if well boiled and well chewed. Macaroni vermicelli, spaghetti, sassagna, Italian paste. (These may be boiled in stock which may be made with vegetables, if the vegetables are strained first. Essence of celery in quarter to one drop as flavoring). Cocoa freely. Tea (China) infused for short time. Butter in moderation. Cream cheese in small quantity and well mixed with bread in the mouth, or grated parmesan, but must not have any other kind of cheese. Gravy without grease from any kind of meat. Savory jellies (if there be no solids in them). Sponge biscuits. Madeira cake (plain, no currants, no peel). Grated meat, tongue, etc. Toast, if it be well masticated, but no hot buttered toast. Stale bread or toast in soup. Honey or golden syrup. The syrup of jam or marmalade with the seeds or skins strained out carefully; fruit jellies, apple jelly, quince jelly, guava jelly with bread or bread and butter, or with any kind of corn flower or arrow root, or macaroni or any kind of farinaceous food allowed.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division ; Surgeon Toronto Western Hospital.

FISTULA IN ANO.

J. A. MacMillan, in the *Detroit Medical Journal* for February, gives the following as the causes of fistula in ano :—

1. Low power of resistance in the anal and ischio-rectal tissue.
2. Pulmonary tuberculosis.
3. Lesions of the ano-rectal mucous membrane, such as hæmorrhoids, fissures, and ulcerations, which permit the entrance of pyogenic organisms to the perirectal tissue.
4. Ischio-rectal abscess.
5. Traumatism.

When the fistulous tract has been completely exposed by an incision, it should be curetted or scarified and the wound should be thoroughly and evenly packed with sterilized gauze.

In Gant's recent work on rectal surgery, it is stated that not more than fifty per cent. of the operations for the cure of fistula in ano are followed by cure, and the writer believes that the fault lies not so much in the operative technique as in the after treatment.

The wound should be dressed at least every twenty-four hours until completely healed. After granulation begins, while the wound is still deep, the dressing should be done twice a day.

In order that the wound should granulate evenly from its deepest part towards the surface, it is necessary that the gauze packing should be most carefully applied. The writer gives the purposes of his packing as follows :—

1. To control hæmorrhage and give relief during the first twenty-four hours by firm packing.
2. To keep the sides of the wound separated during the second and third days by loose packing.
3. To control exuberant granulations and maintain uniform healing, pressure from the gauze is applied as indicated, namely, firm packing where the granulations are exuberant, and very gentle pressure where they are frail.
4. Besides these special purposes, the packing has the general function of drainage.

SOME POINTS IN THE TECHNIQS OF ASEPTIC OPERATING.

Dr. Henry T. Byford, of Chicago, in a paper with this title, said he did not offer any new method, but emphasized the necessity of more thoroughness in those already used. The method he employed consisted in (1) twenty minutes scrubbing with green soap and waer; (2) three minutes in dilute acetic, or citric, or oxalic acid; (3) five minutes in strong alcohol; (4) five minutes in a 1-2000 solution of mercuric chloride in water.

The author considered the use of rubber gloves open to the objection of macerating the cuticle, with danger of their being punctured and allowing septic sweat to escape. He deprecated the mixing up of the steps of the preparation by using a combination of green soap and alcohol, or by dissolving the mercuric chloride in alcohol, since aqueous solutions were more efficient than alcoholic. He advised disinfection of the hands one or more times during the course of long operations. Attention was called to the necessity of unusual care in the preparation of the field of operations in operating about the pubes and vulva. He recommended absorbent rather than occlusive dressings in the dressing of wounds after operation.

THE SIGNIFICANCE OF EXTRAVASATED BLOOD IN THE HEALING OF FRACTURES.

It is a much mooted question, whether the blood poured out between the fractured ends of bones serves any function in the process of healing. Prof. A. Bier, the surgeon of Bonn, Germany, (*Medizinische Klinik*, No. 1, 1905) believes the fact to be unquestionable, that the blood extravasation is a direct agent in the healing process. It not only acts as a stimulus to, but also serves as a matrix for, new bone formation. Subcutaneous fractures heal much more quickly than those that are opened up and wired, because the surgeon is always careful to quell all bleeding, and thus to prevent hæmatoma from forming. All the methods of causing pseudarthroses to unite depend upon the fact of increasing the blood supply, to the part, e.g., massage, friction of the bone ends, percussion of the fractured site, and having the patient walk about. When the tibia is injured, a subperiosteal hæmatoma forms, and extensive callus formation results. When a hæmatoma forms in the muscles about the knee, bone is deposited in it. All these facts show that these blood extravasations tend to ossify. Bier has verified these facts clinically by the following procedure: In eight cases of pseudarthrosis due to delayed union, he injected about 20 c.c. of blood about the

ends of the non-united bones. In seven of these cases, bony union followed the treatment. Bier contends that the injected blood sets up the necessary reaction around the fracture site and stimulates the osteoblasts to activity.

THE BUFFALO EXPERIMENT ON CANCER.

The following statement has been given out from the Gratwick Pathological Laboratory of the University of Buffalo: "Drs. Gaylord and Clowes, assisted by Mr. Baeslack of the cancer laboratory of the State Department of Health, have recently performed a series of experiments on mice infected with cancer, which have led to the discovery of an antitoxic serum which visibly affects the growth of cancers in mice, and in a number of cases has been sufficiently active to cause the total disappearance and cure of tumors of considerable size.

"The field which is opened by these primary experiments is apparently a difficult one, but they should prove in principle that not only is cancer curable, but extend the hope that some means may be found to develop a similar immune serum which could be applied to human beings."

GANGRENE OF THE EXTREMITIES IN YOUNG PERSONS FOLLOWING INFECTIOUS DISEASES.

S. Barraud (*Centralblatt f. Chirurgie*, No. 50, 1904), has collected 103 cases of gangrene in young persons exclusive of senile or pre-senile gangrene and Raynaud's disease. As causal factors, embolism 10 per cent.; arterial thrombosis, the most frequent, and venous thrombosis, rare, are found. The mortality is high, 51 per cent.

INTESTINAL OBSTRUCTION IN CHILDREN.

Dr. John W. Erdmann (*Journal Amer. Med. Assoc.*, Jan. 21, 1905) says: The diagnosis is not difficult, although the symptomatology, as given in former textbooks on diseases of children, etc., should be rewritten, with a view to placing all the stress on blood or bloody mucous stools and not on the presence of a sausage shaped tumor. In over 60 per cent. of a series of 28 cases seen by him in 24 of which he operated, no tumor of any kind was palpable per rectum or through the abdominal wall. He does not find on searching his histories, a single acute case in which blood, bloody stool, bloody mucous, or bloody serum was not found, either on the diaper or expelled from the anus after digital examination.

GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynæcologist Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

ROENTGEN RAY IN GYNÆCOLOGY.

The New York Post-Graduate quotes Delphey as saying that the Roentgen ray offers no special diagnostic inducements to the properly-schooled gynæcologist. Plevic tumors, excepting dermoid cysts, can hardly ever be determined by the x-ray. The main use of the Roentgen ray in gynæcology is in the treatment of malignant neoplasms. The proper treatment, when diagnosis is made early enough, is to remove the growth entirely. When this is impracticable, or the growth can only be removed in part, resort should be had to X-ray treatment. Quite a number of cases of carcinomata have been very much improved, and epitheliomata has apparently been entirely cured by this means; and, as certain death is otherwise the only outlook, the patient should be given the benefit of the chance. The rationale of the treatment is not yet completely understood, but is plain that the X-ray in some way interferes with the life of the adventitious tissue, probably in two ways: by causing an inflammatory exudate, which chokes off the blood supply and which is followed by a fibrinoid change; and by causing a degeneration of the cells of all the tissues which are absorbed and excreted through the ordinary channels. Consequently these cases must be treated cautiously watching the pulse and temperature lest too large an amount of waste products be thrown into the general circulation for the eliminative organs to dispose of, in which case there would be likely an acute septic infection or at least a severe toxæmia.

ROUND-LIGAMENT SHORTENING BY AN EASY METHOD.

Dr. M. C. McGannon, of Nashville, Tenn., writes an instructive paper on the above subject in the March number of the *American Journal of Surgery and Gynecology*. We quote the doctor's description of the operation, and also the advantages claimed for it, as follows:—

A central incision, at least two inches in length, is made through the abdominal wall, immediately above the pubic bone. The uterus is freed from any restraining influences, and is brought forward to its normal position. The round ligaments are in turn picked up, about one and one-half inches from their origin in the uterus. A small incision through the peritoneum at this point is now made, and a piece of pedicle silk is passed through the opening and under the ligament. A pedicle needle or

a curved forceps is next inserted at the margin of the wound at its lowest angle, underneath the peritoneum, and made to pass outwards until the round ligament is reached, then along that structure until the point of the instrument emerges through the little slit in the peritoneum previously made over the ligament, about one and one-half inches from the uterus. The eye of the needle or the opened forceps is next made to engage both ends of the silk loop, by which the ligament was surrounded and the instrument is withdrawn conveying with it the thread. Dragging upon this thread draws the ligament upon itself immediately under the peritoneum, and out at the lower margin of the wound, where it appears in the form of a loop. This loop of ligament may then be so manipulated as to place the uterus in the exact position that the operator desires; in other words, the proximal part of the ligament may be made any length that is found necessary to hold the uterus in its normal position. The ligament as it is drawn forward to emerge under the peritoneum, and out at the lower margin of the abdominal opening, puckers and shortens the broad ligament, and tends to elevate both the ovary and the Fallopian tubes. The looped ends of each ligament is secured by stitching with the catgut to the posterior part of each rectus muscle near the lower angle of the abdominal opening, and by uniting them together in the centre line by means of catgut sutures. The abdominal wall may be closed by the usual method.

The advantages for this operation are:—

1. It produces a round ligament of normal length.
2. The ligament is left a post-peritoneal structure.
3. It leaves no injury to the peritoneum by which adhesions may be invited.
4. It utilizes the strongest and most muscular part of the ligaments, and throws out of commission the weak, atrophic, fibrous, distal end.
5. The ligament is attached firmly and efficiently to both the uterus and the abdominal wall.
6. The broad ligament is shortened. This I consider essential to success in all operations for shortening the round ligaments of the uterus.
7. It produces a minimum of trauma and does not penetrate or weaken any important structure.
8. The operation is easy of performance.
9. The time consumed should not exceed fifteen minutes, and in many cases the operation can be completed in five minutes.

OVERLAPPING THE APONEUROSES IN THE CLOSURE OF WOUNDS OF THE ABDOMINAL WALL.

Dr. Charles P. Noble, of Philadelphia, writes an interesting article on the above subject. He says the method is applicable in the closure of all wounds of the abdominal wall, no matter what the location of the particular wound may be.

The writer says it is now a generally received principle that the proper closure of incisions in the abdominal wall involves the union of homologous structures, and it is almost as generally accepted that this is best secured by the employment of the tier suture. There are surgeons who still claim that equally as good results can be obtained by means of the through and through suture, but the claims of these are contrary both to the theoretical considerations involved and to the general experience of the profession.

While the object of the suturing of incisions is to bring the homologous structures of the wound in apposition and to restore the abdominal wall to its original anatomical relations, it is nevertheless true that from the standpoint of the prevention of hernia the most important point is to secure firm union of the aponeuroses; because the strength of the abdominal wall, from the standpoint of resisting intra-abdominal pressure, depends more upon the integrity of the aponeuroses and fasciæ than upon the union of the other structures involved. The usual method advised is to suture these structures either with a running or interrupted suture so as to bring the cut edges in apposition. When it is recalled, however, that the aponeuroses of the transverse muscles are quite thin (about a line in thickness), it becomes evident that the cicatricial union of these edges when merely brought in apposition will be weaker than were the aponeuroses before their division. Impressed by this fact the doctor has made it a practice to overlap the fasciæ from one-third to one-half inch as a routine method. And he says the results thus secured in the prevention of hernia have been such as to convince him that this method insures a firmer union and a more certain safeguard against the development of hernia than any other method in use. Since 1897 there have been approximately eleven hundred and fifty wounds in the abdominal wall closed by this method, and of this number only three cases of hernia are known to have occurred.

In practice the method is quite simple. The incision in the hypogastrium for operation on the female pelvic organs may be taken as the type. This incision is made by choice through the inner border of the right rectus muscle. In closing the wound, the peritoneum is first closed with a

continuous suture of fine cumol catgut. The fat is then dissected from the upper surfaces of the aponeurosis of the transverse muscles on the left side of the wound from one-third to one-half inch. The aponeurosis upon the right side of the wound is then separated for an equal distance from the rectus muscle. The muscles and fasciæ are then sutured by means of a medium weight chromicized catgut suture in the following manner: The suturing is begun at the lower angle of the wound upon the left side. The suture is passed from above downwards through the aponeurosis and rectus muscle. Then the separated bundles of the rectus muscle are united with a continuous suture until the upper angle of the wound is reached, when the suture is passed from below upwards through the aponeurosis upon the left side of the wound. The suture is then passed from below upward through the aponeurosis upon the right side of the wound, and an additional suture is taken above this point to fix the suture and take the strain off that part which has brought the muscle in apposition. The aponeurosis is then closed from above downwards by catching the aponeurosis upon the left side of the wound after the manner of the Lembert intestinal suture, and then passing the needle from below upward through the aponeurosis upon the right side of the wound. When this suture is drawn taut, it slides the aponeurosis of the right side of the wound upon that of the left side and holds the two in apposition; the amount of overlapping depending upon the distance from the edge at which the needle is passed through the aponeurosis upon the left side of the wound. The process is repeated until the lower angle is reached, when the two ends of the suture are tied. In long wounds two or more mattress sutures are placed to take tension off the lines of continuous suture. The fat is closed with a continuous suture of fine cumol catgut. The skin is closed with fine cumol catgut suture by the intracuticular method.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal.

THE PATHOLOGICAL ANATOMY AND PATHOGENESIS OF THE TOXAEMIA OF PREGNANCY.

In this paper, Dr. James Living, in *American Journal Obstetrics*, Feb., 1905, demonstrates three clinical manifestations of the toxæmia of pregnancy and their associated hepatic lesions, briefly remarking the pathogenesis of these. Hæmorrhagic hepatitis, he states, takes place in 95 per cent. of all cases of any variety of eclampsia.

Acute yellow atrophy of the liver is, in his opinion, closely related to eclampsia, and is dependent on the toxins associated with pregnancy.

A case, four and a half months pregnant, is reported. Toxaemic symptoms were present for two weeks followed by fever, epistaxis, jaundice, muscular twitching, and one convulsion, two hours before death. The urine was free from albumen and casts, but contained leucin and tyrosin.

Autolysis of the liver cells is present in certain cases where the microscopic condition of the liver is apparently unaltered. In such cases the function of the organ is profoundly affected.

A series of cases of severe vomiting of pregnancy terminating fatally show the condition to be associated with (1) acute yellow atrophy of the liver; (2) the same necrotic process in a liver which is not reduced in size; (3) less marked degenerative changes indicative of extensive autolysis and profound disturbance of liver function. These lesions are thus identical with those found in eclampsia, therefore, the process in both series is one and the same.

One experiment on a rabbit, demonstrating the toxic effect of the blood from a case of pernicious vomiting, is mentioned. 10 c.c. of such blood, injected into the abdominal cavity of a rabbit, resulted in immediate muscular spasms, death following five days later. The liver showed well marked degenerative changes.

That leukæmia is occasionally close to the toxæmia of pregnancy. Living advances the following facts. Its frequent development shortly after pregnancy, and the frequent appearance of leucin and tyrosin in the urine in both conditions.

Living has no opinion as to the exact identity of the poisons but suggests that they are various and not fully accessible to present clinical and biological methods.

He suggests that acute yellow atrophy of the liver may occur in mild form and, in fact, is present in all cases of vomiting of pregnancy, hence no doubt can exist that the occurrence of this condition is often followed by recovery.

With regard to the urinary changes in the toxæmia of pregnancy, Living believes that the examination for various unoxidized proteid derivatives will prove a fairly reliable indication of the seriousness of the case. Not only must the precipitate be examined for leucin and tyrosin, but the filtrate must be tested as well.

He regards the toxæmia of pregnancy as being due to a "functional disturbance of the liver, usually but not necessarily attended by severe anatomical lesions of the kidneys and other organs. When albuminuria appears the disease is already far advanced."

As the disease is the result of a disturbance of function and the organic changes are only dependent on the presence of toxins, then in most cases where these can be eliminated recovery follows as cases have proved.

Saline irrigation and infusion seem to be the most effective agents. Ringer's fluid Living recommends as being more effective than plain saline. Its composition is as follows: Sodium chloride, seven grains; calcium chloride, two grains; potassium chloride, one grain; sodium bicarbonate, one grain; aq ad, 1000 c.c. The solution is best prepared with distilled water recently boiled, and the salts must not be heated enough to decompose the sodium bicarbonate.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

OPTIC NEURITIS AND FACIAL PARALYSIS.

E. A. SHUMWAY, Philadelphia (*Journal A. M. A.*, February 11), reports a case of postpapillitic optic atrophy with a history of prior right-sided facial paralysis with pain in jaw and with a noticeable flattening of the right side of the face from loss of sub-cutaneous fat, together with enophthalmus, all on the right side, while the optic atrophy was bilateral, most marked on the left. He finds in the literature only seven similar cases of this association of facial paralysis and optic neuritis, though a number of cases of optic neuritis have been reported in connection with polyneuritis. The atrophy and sinking of the eyeball is evidently rarer, as he has found no reports of a similar case. He has, however, been able to examine a case of Dr. Spiller's with flattening of the face and enophthalmus following rheumatic facial paralysis and implying, he thinks, as in his own case, some involvement of the seventh nerve. There were chloroanemic and disordered menstrual symptoms in Shumway's case, but he does not attribute to them the optic atrophy. His conclusions are given as follows: "1. Optic neuritis is occasionally associated with facial paralysis, either alone or as part of a multiple neuritis; the etiologic factor may be rheumatism, but at times appears to be infection, the nature of which is as yet undetermined. The optic neuritis is usually of the retrobulbar type, but a decided papillitis may be present, and be followed by more or less marked atrophy. In cases of multiple neuritis of the cranial nerves, the eye grounds should be examined for possible optic nerve complication. 2. In facial paralysis, flattening of the face and enophthalmus may appear, and are to be considered as due to a neuritis of the fifth nerve, and not to involvement of possible sensory fibres in the facial nerve."

THE ATTRACTIVE FEATURES OF GRADUATED TENOTOMIES UPON THE EYE MUSCLES.

A. L. Ranney gives the histories of twenty illustrative cases in which by graduated tenotomies he has restored to perfect health patients apparently suffering from incurable maladies. His experience leads him to consider eye-strain, which may exist without any refractive error, capable of inducing conditions of the utmost gravity, often apparently having little or no association with the eyes. Among these are asthenopia, epiphora, wry neck, epilepsy, insanity, nervous prostration, chorea, progressive muscular atrophy, loss of the intellectual faculties, uncontrollable neuralgia, insomnia, and uncontrollable vomiting. Even glycosuria may be relieved by correction of heterophoria, as apparently the close anatomical relationship of the diabetic center and of those controlling the eyes caused irritation of the former when the latter are called upon for abnormal activity. These cases require careful study, and frequently demand the methodical use of prismatic glasses for purposes of diagnosis in order to ascertain latent muscular errors. Tenotomies should never be suggested or performed too hastily, and those who have the largest experience are the slowest to operate, but the author condemns efforts to cure genuine heterophoria by the use of prisms.—*Medical Record*, February 11, 1905.

LOSS OF SIGHT FROM DISUSE OF THE EYE. (AMBLYOPIA EX ANOPSIA.)

D. B. St. John Roosa believes that the term *amblyopia ex anopsia* should be limited to those cases in which the use of the eye has been given up because to use it involves double vision, the maculae luteae being no longer in exactly corresponding positions, as is the case in any form of strabismus. Amblyopia due to obscuration of the media does not belong in this category. The case reported illustrates the fact that amblyopia in the deviating eye in strabismus is functional and not organic, and that it may be recovered from perfectly. The patient was a man of forty-six, whose right eye was amblyopic owing to suppression of the image accompanying divergent strabismus following overcorrection of a convergent strabismus. Five years ago the left eye, on which he was dependent for vision, was put out of function by an accident. Vision in the right eye was at this time 20-200 with a cylindric glass of +4D., but with suitable correction and practice, in the course of five years he gradually regained the function of the organ until now his vision with the formerly amblyopic eye is 20-30 with an appropriate glass. The vision for fine type improved much more quickly than that for distance.—*Medical Record*.

CURRENT CANADIAN MEDICAL LITERATURE.

The Canadian Practitioner, March, 1906.

EXCISION OF THE WRIST.

This paper was read by Dr. F. W. Marlow at a recent meeting of the Toronto Medical Society. He referred to Lister's operation as advocated by that surgeon in 1865, in which the carpal bones and the ends of the radius and ulna and the bases of the metacarpal bones are removed. This operation may be required for tuberculosis of the joint, infection resulting in necrosis, severe wounds and injuries, ankylosis in faulty positions, irreducible dislocations.

Of the methods of operating the most frequently employed are those of Lister, Ollier, Langenbeck, König, and Kocher. The first two are characterized by a metacarpo-dorso-radial and a metacarpo-carpo-ulnar incision. Ollier's method adds a short incision on the radial side for drainage. In the latter three methods there is only a single dorsal incision, Langenbeck's being a metacarpo-dorso-radial, König's having a similar one though not so extensive in an upward direction, while Kocher's is a metacarpo-dorso-ulnar one. All the operations are tedious and often difficult. No diseased bone or synovial membrane should be left. In Lister's method the insertions of the radial and ulnar extensors and the ulnar flexor of the wrist and the origin of the thenar and hypothenar group of muscles are divided. A better result is likely to ensue if it is possible to preserve some of these structures. If it is possible to complete the removal of the diseased parts without sacrificing more than the upper and lateral articular cartilages and surfaces of the metacarpal bases, and at the same time to leave the trapezium, the pisiform and the hook of the unciform, such preservation may be accomplished.

Before the operation an attempt should be made to freely flex and extend the fingers. During the operation the tendon sheaths should be preserved as far as possible, and also all the healthy periosteum. But great care should be taken not to leave diseased periosteum.

The parts are dressed with plenty absorbent and the forearm and hand put in a splint. An ordinary straight splint answers the purpose. The hand is slightly extended and the forearm flexed and semi-pronated. To allow the approximation of the bones the splint should be removed and adjusted every two days. At the end of one week passive motion

should be commenced, and kept up until the risk of ankylosis is over. Movements of the thumb and fingers should be persisted in. The operation may be followed by a flail-joint, complete ankylosis, or a fibrous union and mobility. An interesting case is reported.

THE USE OF THE PELVIMETER DURING THE PUERPERIUM.

Dr. F. Fenton has a short article under the title of "some lessons to be derived from the use of the pelvimeter during the puerperium." He directs attention to the fact that the position of the fundus uteri should be the guide as to when the patient may be allowed out of bed. The disappearance of the fundus below the symphysis should be the obstetricians' milepost. Dr. Fenton's rule is to keep the patient in bed till the second day after this position of the uterus has occurred. He mentions sepsis of the endometrium and lacerations of the cervix as delaying involution. He has repaired cervical lacerations five or six days or even as late as ten days after labor. He does not hesitate to keep a patient in bed till the fundus is in a satisfactory position and remarks, "but it is not only in normal cases that the pelvimeter is of service to us."

INVOLUTION AND SUBINVOLUTION OF THE UTERUS.

Dr. Adam Wright discusses this subject briefly. He thinks that sufficient attention is not given to the progress of uterine involution after labor. He is in the habit of watching carefully the involution line and finds that the uterus contracts more rapidly in primipara than in multipara. The fundus reaches the top of the symphysis on the eighth day in 70 per cent. of the former and only in 40 per cent. of the latter. He does not think that the ascent of the fundus always means sepsis, nor its descent the absence of sepsis. When the fundus is found too high on the second day, it may be due to a distended bladder. He does not think subinvolution alone should lead us to interfere with the uterus. He also holds that recent and old lacerations may cause delay in the uterus returning to its proper size.

OBSTRUCTION OF MAIN BRONCHUS BY A SHOE BUTTON.

Dr. W. B. Thistle reports an interesting case. The diagnosis was extremely difficult, there being hyper-resonance over the upper portion and dulness over the lower portion of the lung. At the end of two months, a violent coughing spell brought up a good deal of pus and a corroded shoe button. The conditions at once changed, over the dull area there was bronchial breathing. The recovery was good.

The Maritime Medical News, February.

THE DOCTOR AND THE CRIMINAL.

Dr. O. J. McCully, M.R.C.S., Eng., of St. John, N.B., takes up this subject in an exhaustive and timely article. First he deals with some of the fundamental laws of evolution and dissolution, and applies them to the nervous system. He points out the advance made by medical science in showing that epilepsy and insanity were diseases and not diabolic possessions. Reference is made to the teachings of Aristotle that certain conformations of head and physiognomic expressions indicated vicious and criminal instincts. The work of Gall and Despine is referred to as creating our modern Anthropology and Criminology. The great work of Lombroso on Delinquent Man laid a firm foundation of the study of the criminal. Much work has been done in Britain along this line by Morrison and Maudsley. The criminal must be studied biologically and sociologically. Anatomical abnormalities are very common in criminals, especially about the head and brain, the latter usually being considerably under the average weight. The convolutions are often irregular, or pertaining to the carnivorous type. There is a tendency to a confluence of the fissures; and the capillaries are degenerated, the meninges thickened and the remnants of old congestions. The lower jaw is usually heavy and projecting. A receding chin is found in criminals who are such from weakness. The ears are large and often present a tubercle on the helix and a prominent tragus. Prominent zygomata and cheek bones, badly formed and deflected noses, and many wrinkles are marks of the criminal type. Criminal women have usually a great deal of hair, which pertakes of a distribution similar to that of the male.

With regard to the physiognomy of criminals Lombroso is quoted as follows: "They are remarkable for the mobility of their features and of their hands; the eyes are small and very restless; eyebrows thick and close; nose often crooked and incurved; the forehead nearly always narrow and reclining; the complexion pale and yellow and incapable of blushing." Any one of these features may not count for much; but, taken together, they make a strong case. Criminals resemble savages and the insane in being very insensible to pain, and can inflict much physical torture upon themselves. They possess psychical peculiarities. It is very rare to find a true criminal express remorse, and as Gall said, it is that he was caught. The criminal is more astute than intelligent, and he lacks in forethought, thus overlooking the possibilities of his action and afterwards loses caution. Criminals are always vain. They are regarded by their associates as heroes and they so consider themselves. They are lazy and it is the desire to escape work that makes them resort to crime in many cases.

As much as 60 per cent. of criminals show a hereditary history of crime, insanity, epilepsy, or drunkenness. The latter feature in their heredity is very marked, drunken parents producing a large number of the criminals. Murder and crime against the person are more common in tropical than northern climates, and in summer than in winter. Destitution causes crime as well as a sudden rise in wages, through the dissipation that results.

These varieties of the criminal type, such as the criminal by passion, or one who acts in uncontrollable anger, the occasional criminal, or one who yields to temptation, the instructive criminal who has no restraining social instincts, the professional criminal, and criminal insane. Our present legal system does not take these features into consideration and has regard too much to the crime and the punishment, while true criminology considers the crime, the criminal and the protection of society. Crime is the result of forces that have been acting so as to affect the individual, in the same way that insanity is the result of a diseased or abnormal condition. "Criminals are manufactured," said Maudsley, "like steam engines."

In dealing with punishment, the writer does not object to the death penalty for some cases, as it rids the community and is more humane than life imprisonment. He strongly condemns definite sentences. Criminals should be committed for study and reformation. An effort should be made to pick out and treat abnormal children. All children should be taught to use the hand as well as the head, as this tends to correct indolent habits, so common in the criminal. All those conditions that cause hereditary taints must be sought out and corrected.

EDUCATION AGAINST PULMONARY TUBERCULOSIS.

Dr. J. H. Scammell, St. John, N.B., lays down the following conclusions as admitted by the profession :

1. Tuberculosis is a communicable disease, due to Koch's tubercle bacilli acting on an organism prepared to receive it, or unable to resist the bacilli when present in large numbers.

2. Tuberculosis is not to any great extent hereditary.

3. Tuberculosis may be prevented by reducing the sources of infection by improving the environment, by strengthening the individual.

4. Tuberculosis, in many of its severest varieties, can be cured.

The great work of educating the public on the infectious and preventable nature of the disease rests largely on the shoulders of the medical profession. The consumptive should be put in possession of the instructions that will enable him to lessen his danger to others. To spread such information all cases should be reported.

*Dominion Medical Monthly, February, 1906.***GENERAL INFECTION BY THE STAPHYLOCOCCUS, STREPTOCOCCUS AND PNEUMOCOCCUS.**

Dr. H. B. Anderson reported a case of general infection by the above germs to the Clinical Society of Toronto. The text of his paper appears in the *Dominion Medical Monthly* for February. Blood, taken from a vein, yielded staphylococci in cultivation. Pus from an otitis media showed the presence of streptococci, and there was also during the illness an attack of erysipelas, due to this germ. There was a typical pneumonia caused by the pneumococcus. There were abscesses, rheumatic pains, a pleurisy, inflammation of the pharynx, spleen and liver, and an extension of this to the peritoneum. The illness lasted from December, 1903, to September, 1904, when the patient, a woman aged 39, died. Towards the end of the illness bed sores formed. There were chills and considerable variation of temperature. The blood count on one occasion was 2,736,000 reds, 116,000 whites, and 70 per cent. haemoglobin. "The patient presented in succession the clinical evidences of a general infection, endocarditis, acute splenic tumor, perisplenitis, left basal pneumonia and pleurisy, acute naso-pharyngitis, double suppurative otitis media, erysipelas, pains and swelling in numerous joints, intense pain and tenderness in the limbs, multiple subcutaneous abscesses with resulting indolent ulcers, right apical pneumonia and generalized right pleurisy, perihepatitis and paralytic distention of the bowels." It was not possible to discover the point of entrance of the infection.

THE VOMITING OF PREGNANCY.

This is the subject of the article by Dr. S. J. Elkin, of Winnipeg. The reflexes are discussed at considerable length, such as tickling the sole of the foot causing a movement of the leg, the irritation of a foreign body in the eye producing a flow of tears, and the presence of cough from some body in the meatus of the ear. In the pregnant uterus the foetus produces stimuli which may act on the muscles of the uterus through the spinal cord and cause an abortion. On the other hand the stimuli may be carried to the medulla and be then reflected upon the stomach through the vomiting centre, giving rise to nausea, vomiting, or anorexia. The condition of the nervous system may have something to do with the effects of those stimuli, as some nervous systems are less stable than others. In some cases the bearing and nursing of children reduce the health and render the patients more sensitive to reflex influences. In sea sickness the motion of the vessel disturbs the semi-circular canals causing an irritation which is carried to the medulla and thereupon affects the stomach. In

these cases of sea sickness tolerance is established, and this may account for the cessation of vomiting in pregnancy in most instances as the system becomes accustomed to the condition. Means to allay the sensitiveness of the nervous system may do good. The many drugs that have been employed for the vomiting are of doubtful value. Stretching the cervix may relieve some cases, as may also the application of cocaine. The frequent taking of some food has proven useful. Diverting the surplus energy of the nervous system in some other way than upon the stomach is of much benefit.

The Montreal Medical Journal, February, 1905.

ACTINOMYCOSIS: A SYMPOSIUM.

The first paper is a report of cases and some comments by Dr. James Bell, of Montreal. He remarks that the cause of the disease is streptothrix actinomycotica, and that it is common to man, bovines, sheep and pigs. The disease is generally chronic, but may be acute. As there is a good deal of proliferation of tissue, the condition may be mistaken for other granulomata such as tubercular and syphilitic lesions. Langenbeck discovered the parasite in 1845, but Israel's work in 1878 made the disease well known. A certain diagnosis depends upon the discovery of the parasite, which is sometimes very difficult to do. The lesions of actinomycosis may be found in almost any tissue of the body. The actinomyces may be carried by the vessels to remote organs. Animals have been inoculated with the fungus from other animals, but it is rare for the disease to be communicated from one person to another or from a lower animal to man by contact or by their flesh used as food. The parasite occurs as a smut on grains and grasses, notably bearded varieties. The fungus may enter through the mouth or the digestive canal, or by means of a wound, or be inhaled as dust from the grain or grass. The features of the disease of importance for its detection are proliferation and tissue increase, the tendency to extend to the surface and to enter the blood vessels, and the presence of yellow granules in the pus. This latter sign is not very reliable. The disease is not likely to be mistaken for cancer or sarcoma. The treatment consists of the radical removal of the growth where possible, or thorough curettage and the application of tincture of iodine or nitrate of silver. The internal administration of potassium iodide has proven of much benefit. A number of cases are reported. Dr. Bell states that it may not be too great a flight of the imagination to regard a similar parasite as the cause of cancer and sarcoma.

Professor J. G. Adami discusses some points in the history of the disease and its causation. He refers to the work of Langenbeck, Israel,

Louis, Lebert, Bollinger, Ponfick, Bostroem and others. Bostroem was the first to succeed in making cultures of the ray fungus in 1888. Dr. Adami thinks that the ray fungus constitutes an intermediate form between the bacteria and the hyphomycetes proper or moulds. The opinion is ventured that we have to deal with more than one variety of organism; and this is borne out by the difference in the clinical history of cases and by the microscopic appearance of the mycelium.

Dr. W. W. Chipman follows with a paper on the Clinical Aspects of Actinomycosis. Two interesting cases are reported, both being of the pelvic organs, one under the care of Dr. Berry Hart, of Edinburgh, the other under Dr. Gardiner of Montreal. In both cases the primary focus of infection was the intestinal canal. One of the cases ran an acute course with fever, rigors and rapid amaciation. The other case was chronic with very little fever, pain, emacaton, or loss of strength.

Dr. W. F. Hamilton discusses actinomycosis from the medical point of view. He remarks that surgery must be the mainstay in the treatment of the disease. There are cases that cannot, however, be dealt with surgically. Potassium iodide in free doses has been of benefit. The x-ray treatment has been tried, but with doubtful results. Lately, Prof. V. Baracz has introduced the use of colloid silver or colargol by means of intravenous injection.

Dr. A. G. Nicholl takes up the Bacteriology of Actinomycosis, which belongs to a group of disease known as the infective granulomata, such as farcin du boeuf, glanders, tertiary syphilis, leprosy, tuberculosis, actinomycosis, mycetoma pedis, and mycosis aspergillum. In all these diseases the lesions are histologically similar. With regard to the organisms, in glanders, leprosy and tuberculosis there is a frank bacillus; in farcin du boeuf, a branched, thread-like form; in actinomycosis, a rosette-shaped organism; and in the melanoid variety of mycetoma and in mycosis aspergillina, a much higher type, a hyphomyces. Some attention is given in the paper to the changes the above organisms go through in the course of their development. In actinomycosis the organisms do not always take on the club form, but assume the long branching form, as a streptothrix. Actinomycosis must be distinguished from diseases where granulomata are present, especially tuberculosis. The discovery of the ray fungus and the sulphur grains in pus, sputum, or other discharges clears up the diagnosis.

Dr. E. W. Archibald follows with some remarks on the Clinical Bacteriology, in which he mentions seven varieties of the organism have been found that are pathogenic for man. Dr. Keenan, Dr. Abbott, Dr. Garrow and Dr. McKenzie have also some additional remarks upon the disease, and the varieties of the organisms causing.

URINARY EXAMINATIONS IN NEPHRITIS.

This is the subject of an interesting paper by Dr. W. W. Francis. In some instances alarming symptoms may arise, or the cases terminate fatally, when the urine revealed nothing to create suspicion, as albumen was absent. Likewise, the estimation of the urea is of little value, as it may vary very much in nephritis. With regard to casts the writer states that they may be present in abundance without albumen and in conditions where there is no primary nephritis. Also casts may be extremely rare in cases with abundance of albumen. It is remarked that blood in the urine may evade every search for its source. It is also stated that results of the urinary examinations may lead one to expect conditions in the kidneys which the autopsy completely negatives. In some cases the urine may vary so much from day to day that it is impossible to decide upon the condition of the kidneys. Again the kidneys may be seriously invaded by sarcoma and yet the urine present very little to reveal the presence of such disease. Much importance is attached to variations in the quantity and specific gravity of the urine, indeed this is regarded as of more value than anything else.

PANOTITIS DURING TYPHOID FEVER.

Dr. G. K. Grimmer reports a case in which there was a very destructive otitis in both ears during typhoid fever. There were the formation of pus and the loss of the ossicula. There resulted complete deafness. Antiseptic syringing was kept up and some polypoid granulations removed as well as the small bones of the ears. Potassium iodide was given internally and the daily hypodermic injection for a month of 4 to 8 minims of a 1 per cent solution of hydrochlorate of pilocarpine.

MALIGNANT PUSTULE AND SEPTICO-PYÆMIA.

Dr. Campbell reports a case of anthrax affecting the shoulder ending in death. Dr. McKenzie gives the history of a case of septic-pyæmia which ended fatally, and where the organism found was the staphylococcus.

QUEBEC MEDICAL NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Windsor Mills

On February 21st a union banquet was held by the Societe Medicale de Montreal and the Montreal Medico-Chirurgical Society, the first function of the kind in which Montreal English- and French-speaking medical men have met under the names of their societies.

Many speeches were made and the fraternal good fellowship which existed between the guests was a pledge of the harmony between the French- and English-speaking sections of the profession.

Dr. E. P. Lachapelle, who was chairman, was supported by Sir Wm. Hingston, Hon. Dr. Lanclot, Prof. Shepherd, Prof. F. W. Campbell and Dr. Labeye.

In proposing the toast of the Medical Profession, Dr. Lachapelle remarked that it was the first time the whole profession was united in Montreal. He could see no reason why the two elements should not meet oftener socially, for that would help towards meeting together scientifically.

What Dr. Lachapelle particularly urged was unity. By unity they could make the Legislature recognize their rights, whereas now it refused the necessary legislation to suppress charlatanism; by unity they could enforce respect from other professional bodies; by unity they could imbue the public with a proper respect to do justice to medical services. They constituted the best and most unselfish ally the public possessed, for often they worked disinterestedly. Why could not the medical profession with its societies, hospitals and hygienic bureau, make its influence felt more strongly? Unity only had been lacking, and he was happy to think that this banquet marked an era of advancement, the dawn of that union they required. Difference of language should not constitute a barrier, but be they French-Canadian or English-speaking Canadians, their one object was the progress of their profession, in the fullest sense of the word.

In responding as the representative of McGill University, Prof. Shepherd mentioned that there was still a regulation in existence permitting examination papers to be written in either French or English. He briefly referred to the friendliness of McGill in past and present to their French-Canadian confreres, and urged that difference of race and language should be forgotten.

Sir William Hingston, who replied for Laval University, spoke both in French and English. He said that medical science knew no geographical boundaries, and there was no such thing as a purely national science. Each country knew and availed itself of the science of another, and Canada stole more than them all, taking from Germany, France, Great Britain and the United States.

"I want to urge upon you," said Sir William, "that the more you meet together, the more you unite, the more you will gain. That is the purpose and function of every well educated gentleman."

Prof. F. W. Campbell, replying for Bishop's University, told some anecdotes of those men of the past, who had set their seal on the medical profession in Montreal—Drs. Munro, Trudell, Pelletier, Bruneau, Dean Holmes, Scott, Robert Palmer Howard, Sutherland, and Professors George W. Campbell and Fraser.

Profs. L. de L. Harwood and Armstrong replied for the Medico-Chirurgical Society, and Dr. J. G. McCarthy and Prof. Mercier for the Societe Medicale de Montreal.

Songs were contributed during the evening by Drs. Fleury, Lockhart, Beauchamp and Haldimand, Dr. G. E. Cartier acting as pianist.

It is stated that the Faculty of Medicine of the University of Bishop's College is to be amalgamated with the Medical Faculty of McGill University. The details have been discussed, but as yet no official announcement has been made, and those most concerned in the movement have nothing to say upon the matter, and declare that the newspapers are premature in their statements. The question has been brought up many times in an unofficial way, and it has been surprising to many that the faculties have not united long ago. The Medical Faculty of Bishop's College is quite a recent institution, having been founded in 1872 by Dr. F. W. Campbell, Dr. Trenholme and others. Dr. Campbell was its first registrar and subsequently became Dean of the Faculty, much of the life of the College being due to his untiring efforts.

It is believed that McGill will recognize the medical degrees granted by Bishop's College in the past, and that present students will be placed on equal footing with those of McGill.

The eighty-second annual meeting of the Board of Governors of the Montreal General Hospital was held on February 21st. The chair was occupied by the President, Mr. Jas. Crathern, who, in his opening address, said that the income of the hospital for the past year amounted to \$83,589, which is \$7,605 less than in 1903. He expressed the hope that the citizens of Montreal would provide by their annual subscriptions the necessary funds to care for the sick and injured, regard-

less of race or creed. In December, 1903, the endowment fund amounted to \$50,500, to which \$25,000 had been added during the past year.

The total number of patients which have been passed through the wards of the hospital during 1904 were 3,144, against 3,066 in 1903.

The outdoor patients numbered 38,922, against 35,984 in 1903, showing an increase of 2,938.

Nineteen nurses graduated and received their diplomas and medals, making a total of 233 that have passed through the training school since its establishment.

The committee has completed the purchase of the whole frontage on Dorchester Street from St. Dominique to Cadieux, at the cost of \$25,000, and it is hoped that an additional wing will be erected upon this newly acquired property.

The average number of days spent in the hospital was 22.05, and the aggregate number 69,212, an increase of 1,775 over the year previous. The death rate was 7.98 per cent., or 4.9 per cent. exclusive of deaths occurring within three days of admission.

Two hundred and forty-five autopsies were held in the pathological department, and 1,374 examinations carried out by the attending staff.

The following staff was elected for the year:

Physicians—W. A. Molson, M.D., M.R.C.S. (Eng.), A. D. Blackader, B.A., M.D., M.R.C.S. (Eng.), F. G. Finley, M.D., H. A. Lafleur, B.A., M.D.

Surgeons—F. J. Shepherd, M.D., M.R.C.S. (Eng.), George E. Armstrong, M.D., J. Alex. Hutchinson, M.D., L.R.C.P. & S. (Edin.), J. M. Elder, B.A., M.D.

Assistant Physicians—F. W. Campbell, M.D., L.R.C.P. (London), G. Gordon Campbell, B.Sc., M.D., S. Ridley Mackenzie, M.D.

Assistant Surgeons—Kenneth Cameron, B.A., M.D., Chas. W. Wilson, M.D., M.R.C.S. (Eng.), J. Anderson Springle, M.D.

Specialists—Oculist and aurist, John J. Gardner, M.D.; assistant oculist and aurist, J. W. Stirling, M.B. (Edin.); gynaecologist, F. A. Lockhart, M.D.; assistant gynaecologist, John D. Cameron, M.D.; laryngologist, H. D. Hamilton, B.A., M.D.; assistant laryngologist, George K. Grimmer, B.A., M.D., F.R.C.S. (Edin.); neurologist, David A. Shirres, M.D.

At a meeting of the St. Francis Medical Association the question of the indiscriminate use of wood alcohol was discussed, and it was decided to petition the Minister of Justice in connection with the sale of the alcohol. The petition points out that wood alcohol is used largely as a substitute for grain alcohol. It is stated on reliable authority that unscrupulous manufacturers of alcoholic preparations use refined

wood alcohol for making liniments, essences, medicinal extracts, and proprietary remedies, and is even used for adulterating whiskey, a number of deaths having recently taken place in New York in this way. It is also retailed as a substitute for the more expensive grain alcohol for bathing and sponging the sick, for use in Turkish bath cabinets, etc. It is recognized by the highest medical authorities as a highly dangerous poison, many deaths being recorded from its use; not only is it dangerous to life, but it has been proved that its use has been followed by total blindness.

Dr. C. Wood, of Chicago, and Dr. F. Buller, of Montreal, record 153 cases of total blindness, and 122 cases of death from its use during the past few years. The petition points out the danger from the use of this alcohol, not only when taken internally, but also when imbibed by absorption through the skin. It is also stated that some druggists substitute wood alcohol for grain alcohol, and these facts warrants the secretary to drawing attention to the evil. It is suggested that all wood alcohol be labelled poison, and also that its use in adulterating articles of food for human consumption be made a criminal offence.

Dr. Camirand reported an interesting case of sarcoma of the cranium, which involved the brain, there being but few pressure symptoms with the exception of an optic atrophy following neuritis. The tumor was operated upon, but death resulted. Photographs and specimens completed a most instructive demonstration.

Dr. J. Roddick Byers read a paper upon Relative Aortic Insufficiency, illustrated by two cases from the wards of the Royal Victoria Hospital.

The Corporation of the Sherbrooke Protestant Hospital met in February, and the Governor's report was submitted for approval.

The report states that there was a large increase in the number of patients admitted to the hospital during the past year.

There were admitted 282, and of these there were discharged cured 246, improved 9, unimproved 4, died 17. The aggregate number of days in the hospital was 4,807, the average being 17 per patient. The financial report showed a satisfactory year. The total contribution from the public amounted to \$3,645.93, hospital earnings \$3,689.54, making a total of \$7,335.47. There was a balance of \$950.03, which was carried to the capital account.

Major Wood, who has recently donated sun-parlors to the hospital, and in times past has contributed so largely to all the funds, tendered his resignation as President, and a resolution of regret was passed by the Board.

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EDITORIAL.

HIGH BLOOD PRESSURE.

Cases of this nature are very common. They are marked by some abnormal resistance to the onward flow of the blood. Degeneration in the blood vessels, chronic disease of the kidneys, or some poison in the blood giving rise to high arterial tension, leading to cardiac changes, are the features of these cases. The treatment of these cases resolves itself largely into that of the conditions leading up to the cardio-vascular changes and high tension. It is of the utmost importance that cases of high arterial tension should be detected as early as possible, as they are much more likely to yield to treatment in their early stages than when they are advanced and the vascular system has undergone serious degenerative changes. It should always be borne in mind that, setting aside ordinary diseases and accidents, the duration of life is mainly determined by the condition of the heart and arteries. "A man is as old as his arteries."

The heart, the blood vessels and the kidneys are very closely linked together in all true high tension cases. Indeed, the late Dr. G. W. Balfour, of Edinburgh, stated that it was quite impossible, in most cases, to say whether granular kidney and arterio-sclerosis were diseases beginning first in the kidneys or in the vessels. An instance of the close relationship between the heart, vessels and kidneys is found in the disease known as chronic Bright's disease. A person may die of chronic Bright's disease with fairly normal kidneys, the force of the pathological changes having expended itself on the vessels. In chronic nephritis, the earliest symptoms may be cardiac hypertrophy, headaches, increased urine-flow, epistaxis, indigestion, or a general failure in health before the kidneys are suspected, or, indeed, could be shown to be diseased.

The earliest signs of high arterial tension or chronic Bright's disease are to be found in derangement of function. It is through the blood supply to the various organs that their functions are maintained and performed. Early in high arterial tension and granular kidney, the regulating qualities are the arterioles begin to suffer, and, consequently, there is derangement of function. The small arteries are the first to suffer and indeed may suffer for a long time before marked changes take place in

the larger arteries, the heart, or the kidneys. Among the earliest symptoms may be insomnia, vertigo, weakness, headache, slight aphasia, nervousness and momentary unconsciousness. In these cases, so long as the tension is maintained the patient is not likely to suffer from the circulation, though there are many dangers to the nervous system.

In the management of these cases it is necessary to find the cause and treat it and not merely to direct attention to the high tension symptom. Among the causes of prolonged high tension, over activity of the circulation and the presence in the blood of toxines take first place. Nervous strain, worry, over work, severe and prolonged physical exertion come under the first head; while defective excretion of the waste products of metabolism, as by defective action of the kidneys, belong to the second. But many poisons may be introduced into the system, such as alcohol, lead, and those arising from over eating.

In the treatment of high pressure cases, warm baths are of much value, as they relax the arterial system and relieve the heart in this way. The elimination of toxines is also encouraged and the vascular load lessened. If salines be added to the bath a better impression is made upon the skin. It is these warm baths that constitute a leading feature of the Schott treatment of cardio-vascular disorders. But there are examples of high blood pressure and vascular changes due to this among business men who are too close at their duties and who may consume a considerable quantity of alcohol. The treatment of such cases lies in the correction of these habits. It has become a well established fact the most successful men often overwork themselves during their prime and suffer from cardio-vascular changes which tend to very materially interfere with their health in the latter period of life, or even to seriously reduce the duration of life.

The cultivation of a cheerful disposition is of much importance in the management of these cases. This should never be overlooked. Depression, anxiety and worry may defeat every effort made for the benefit of such cases.

The hygienic treatment must be the mainstay of the physician. Errors in diet and habits must be corrected, and the eliminative functions must be put in the best condition possible.

With regard to drugs, no routine practice should be followed. Iodides are of value, and some contend that iodine should be given and let it make its own compound in the system. The nitrites are capable of producing a temporary reduction of the arterial tension, but it is not likely to succeed for any length of time, as much cardiac irritability often results from this plan of treatment. But the treatment by nitrites merely deals with the symptom of high tension, having no influence on the real conditions or causes. In the later stages, when low pressure takes the place

of the high pressure, or when the heart is beginning to break down from its efforts to overcome the previous high tension, the exhibition of digitalis and strychnine may prove very useful.

In the early stage of high tension cases, the employment of the nitrites is often of very decided value, as they temporarily reduce the tension and enable the system to take greater advantage from the other lines of treatment instituted for the relief of the condition.

EUGENICS.

Much has been said lately upon the topic of "Eugenics." By this term is understood whatever tends to improve the race both as to the in-born qualities and the cultivation of these qualities so as to bring them to the greatest state of perfection. The term eugenics means well born or of good stock.

Stock breeders may know nothing of such a word in its scientific meaning, but they know much about it practically. Successful breeders mate their animals with great care, in order the offspring may possess the maximum of good points. No such care is taken with the human species.

Many qualities in man are admitted by every one as of the utmost importance to the individual and the race. Of these we might mention health, strength, courage, energy, ability, manliness, and courtesyness. Special possessions would be valued highly by those who were fortunate enough to be distinguished in some way, as the poetic gift, the artistic power, the musical quality.

The study of eugenics has for its aim the elevation of the general qualities of the race. By this means the standard of the entire nation would be raised. The political, the social, the religious, the commercial, the educational life would occupy a higher plane; and the total amount of disease, crime and degeneration would be decidedly lessened.

One of the objects of eugenics is to cause the useful classes to contribute largely to the next generation; and that the perverted, sickly, immoral and criminal classes be placed under such restraints as will reduce their progeny to the lowest possible minimum.

This is not at all an academic question. Some states are now moving along lines to limit the marriages among the degenerated classes, as the criminal, the epileptic, the drunkard, the mentally defective. Along this line there is much room for useful advance. The rights of the individual must always be subordinated to those of the State; and, therefore, there need be no compunctions about prohibiting marriage in the case of an epileptic, or one who is mentally defective.

The conditions under which civilization tends to cause infertility must be sought out, as also the conditions under which the most desirable

classes of families have had children of the best types. A distribution of suitable information would do something to discountenance improper marriages. In addition to this, however, the State should legislate along certain lines. It is much better to prevent the birth of the criminal, the epileptic and the mentally unsound than to take care of them after they come into the world. Much is being done at present along the lines of preventive medicine. Why not make preventive medicine apply to the hereditary aspects of the race, as well as to the limitation and control of infectious diseases? One could hardly imagine a more worthy object of legislation than that of raising the general level of the people socially, physically, and mentally, and thereby restraining crime and vice.

The study of and legislation regarding the heredity of disease and crime should be made the subject of close attention. It must be made familiar, until its importance becomes understood and accepted; it must be recognized as a subject, deserving serious consideration; and it must be introduced into the national conscience.

Towards the production of ill health and a wide spread evil influence on the unborn child, perhaps nothing ranks more potently than the consumption of patent medicines, containing alcohol and narcotics in large percentages as many of them do. This evil can be prevented. When we are doing so much to limit the spread of diphtheria, scarlet fever and smallpox, why not also limit the production of drink habits and drug habits by limiting the sale of injurious ingredients in proprietary medicines?

THE DANGER OF BARRED WINDOWS IN HOSPITALS.

News came some time ago from Chicago that a fire broke out in a sanitarium. Twelve men and one woman lost their lives. We quote the following from the description given of the catastrophe:—

"A scene that wrought to the pitch of madness the great crowd that had gathered around the building was enacted at a fourth-story window on the north side. Across this window was a heavy wire screen, and on the outside of the screen were iron bars running parallel to the sill. The space between these bars was too small to allow the passage of even a small boy, and behind them were gathered a crowd of men whose numbers were afterwards found to be between 25 and 30. The escape in other directions was impossible, for the fire filled all the halls, and was steadily eating its way toward the window at which the men were standing. The one chance for life for that crowd of men lay through that screened and barred window. The men closest to the screen tore and tugged at it in a vain effort to tear it from its fastenings, and more behind them fought madly to get close enough to the screen to fasten their fingers in it. So fiercely did the pri-

soners pull at the screen that from the street below were plainly visible tiny streams of blood that trickled from lacerated fingers and hands, and flowed over the window-sill.

The bars were finally wrenched out, and most of the inmates saved."

Recently in two of the Toronto hospitals there have been two fatal accidents, caused by patients, temporarily deranged mentally, jumping out through windows in the higher flats of these buildings. In both of these cases, the coroners' juries recommended that the windows be barred, or protected so as to prevent the recurrence of any such accident.

In the sanitarium in Chicago, just referred to, these precautions had been taken. The result was a catastrophe, far in excess of any that would ever happen by leaving the windows unbarred. It is quite clear that no rule can be laid down. In the well meant efforts to prevent an occasional accident, it is possible to create the conditions that may readily give rise to a holocaust, as in the case of the Chicago sanitarium disaster. It might be well for juries to consider both sides of a question, before they indulge in passing resolutions for the government of public institutions. "Audi alteram partem" and "Ne quid nimis" are excellent working mottoes.

EPILEPSY.

Epilepsy is a disease, or rather group of diseases, that has always attracted much attention at the hands of scientific physicians. We know but little definitely of its pathology; and, so long as this is the case, our treatment must be largely empirical.

There is a tendency for epilepsy to occur in families, along with other neuroses; and is often associated with idiocy, intellectual and moral perversion, body or cranial deformity. There is an unstable condition of the nervous system, or an inherent tendency towards the attacks. This tendency is in most cases congenital and may induce the fits early in life, in spite of all care, or only when the person is subjected to some distinctly exciting cause, later on in life. These may be found in irregular and dissipated habits, sexual excesses, or a lowered state of the general health. The unstable condition of the central nervous system may be thrown into recurrent explosions by some peripheral nerve irritation.

In the study of epilepsy, the sensory nervous system must receive due attention. Whatever the real nature of the motor discharge may be, there is no doubt as to the prominent part played by the sensory impressions that are carried to the centres from all parts of the body. Sensory impressions are the basis of all intellectual processes. So, in like manner, are they the exciters of motor activities. Sensory waves reach the centres and start the motor waves that reach the muscles. Gastro-intestinal derangements,

visceral disturbances, painful teething, the onset of many inflammatory and febrile diseases, may cause convulsions. Given, therefore, an unstable nervous system, some sensory irritation is the requisite stimulus to start the violent discharge of energy.

Nerve force is generated in the nerve cells, or nerveplasma, or their relation to each other. It is stored for use. When this force is liberated in an orderly manner it produces orderly movements; but if liberated in a violent and disorderly manner it gives rise to disorderly movements, or convulsions. This force, or energy, must be some form of chemical change in the grey matter of the brain. Under certain states of the grey matter this energy is liberated as an explosion, rather than as a regulated process under the control of the will. No definite answer can be given to the question what these chemical changes are. Clearly, however, there is some state that readjusts itself by sudden and excessive discharge; and seeks to establish a stable condition by explosion rather than by gradual combustion. Apart from epilepsy, convulsions may be caused by loss of blood, suffocation, injury to a portion of the cortex, electric stimulation of grey matter; and these may become general, with complete loss of consciousness. From time to time, there is an accumulation of this explosive substance to a point beyond the control of the inhibitory influence.

The treatment has been too often relegated to a second place, because it is regarded as an incurable disease in most cases. It should always be borne in mind that epilepsy is rather a symptomatic condition, and is only expressive of something else. It is the duty of the physician in all cases to search out that something else; and institute proper therapeutics. A study of epileptics reveals the fact that they are, with few exceptions, the subjects of poor circulation, have a pallid appearance, and a flabby skin. There is in the great majority of the cases a marked degree of malnutrition.

First then comes the importance of an open-air life. This cannot be over estimated. The victims of this disease do best when employed at some healthful out door occupation in an invigorating country air. Almost every form of exercise may be allowed. It has been observed that the more violent games tend to cause fits during the reaction afterwards.

Next to the out-door life, the diet is the most important part of the treatment. Almost all kinds of foods may be allowed in moderation. It is always important to maintain as good a state of nutrition as possible. The condition of digestion requires the closest attention; and the food should be selected so as to suit the patient's condition. Over feeding must be guarded against. Flatulence and constipation, both common with epileptics, call for treatment. On no consideration allow a heavy evening meal. Stimulants should never be employed.

The entire system of the epileptic should be overhauled, with the view of ascertaining any functional or organic disorder in any of its organs. If any exist, they must be corrected, such as menstrual derangements.

The medicinal treatment has been the subject of much study. The bromides are the principal drugs employed. Their routine administration often does much harm and the abeyance of the fits is frequently purchased at too great a price, large quantities of the bromides, long continued, have very depressing effects upon the nervous system, more particularly upon the brain. They should be employed in such quantities as control the frequency and severity of the fits, without too markedly depressing the patient. In cases where the fits recur at stated intervals, a short course of bromides, before the fit is due, may avert it. Sometimes there are premonitory symptoms, when it is advisable to have recourse to the bromides at once; or, if the attacks come on after any special events, it is well to take the bromides before these events happen.

General and nerve tonics should not be neglected. Phosphorus, arsenic, strychnine, quinine, and, sometimes, iron may be given to much advantage. These remedies may do more for the sufferer, by improving the tone of the nervous system, and preventing the formation of the explosive agent in it, than the bromides can, by preventing its discharge.

In cases where the fit comes on during the night, some suitable nourishment at bed time, such as a glass of hot milk, or beef tea, should be taken; or, if the attacks come on in the morning on rising, the same practice should be followed before getting up. A dose of some heart tonic, at bed time, may also do good. All irregular habits must be restrained and corrected.

THE HISTORY OF PUERPERAL FEVER.

In many instances the medical profession has been led step by step from darkness to light. This was practically the case in the growth of our knowledge regarding the etiology and treatment of puerperal fever.

At one time the disease was regarded as the result of blind chance or Providence. Such views were taught by Hodge and Meigs. At a later period, child bed fever was looked upon as a disease of a very special character, *sui generis*, as claimed by Barker. All of these opinions were wrong as we now know. It is now admitted as beyond doubt that puerperal fever is caused by various pus producing organisms. Of these we may mention the varieties of streptococci and staphylococci, the colon bacillus, the diphtheria bacillus, and the germ of scarlatina. These find their way into the system through lacerations or at the site of the separated placenta. The conditions which result from infection may be compared to sapræmia, septicæmia, or pyæmia following wounds.

A hundred years ago in Aberdeen, Dr. Gordon thought the disease was carried by certain mid-wives. He was coming close to a correct opinion. Later, Dr. Rigby held that the disease was carried from one patient to another. He too was nearing the light.

To Oliver Wendell Holmes, however, belongs the glory of teaching in clear and unmistakable language that puerperal fever was an acute infectious disease. In 1842, he read before the Boston Society for Medical Improvement his paper on "The Contagiousness of Puerperal Fever." In his paper he put on record many cases, and made use of these words: "No negative facts, no passing opinions, be they what they may or whose they may, can form any answer to the series of cases now within the reach of all who choose to explore the records of medical science." Dr. Holmes then indulges in some reflections upon the duty of the medical attendant in such cases, which, we think, shall ever remain as among the richest gems of medical thought as well as of the English language. He concludes by saying: "The time has come when the existence of a private pestilence in the sphere of a single physician should be looked upon not as a misfortune but a crime."

These precious and prescient doctrines were vigorously attacked by Hodge and Meigs. They ridiculed Dr. Holmes' teachings. But truth is mighty and must at last prevail. In 1893, long after the battle had been fought and won Holmes wrote: "I shrieked my warning louder and longer than any of them, and I am pleased to remember that I took my ground on the existing evidence before the little army of microbes was marched up to support my position." In all this Holmes did an immortal work.

There was much to be done, and that work was to fall to the lot of Ignaz Semmelweis. He was a student of Skoda and Rokitansky, and, after graduating, was appointed as an assistant to Klein at the head of the maternity department in Vienna. During the forties the mortality among recently confined women was extremely high. This state of things appealed to young Semmelweis and he made a resolve to try to discover the mysterious cause of puerperal fever. He saw how the disease infested some of the wards and dogged the footsteps of certain attendants. He also noticed that tedious labors and those with lacerations suffered most frequently, whereas those who were admitted after the labor was over were less liable to the disease.

At this time an intimate friend of his, while conducting a post-mortem, wounded himself and died with phlebitis, pleurisy, pericarditis and peritonitis. The whole matter flashed upon his mind. The unfortunate women who died of childbed fever revealed all the appearances of his friend who died from the effects of a post-mortem wound. But as Holmes had

been opposed in America by Hodge and Meigs, so Semmelweis was opposed in Europe by Scanzoni.

Thus it was that the poet doctor of Boston, Holmes, was teaching in America at the same time as Semmelweis in Vienna, that puerperal fever was a contagious disease; and, as such, was preventable. Both were doing their work unknown to each other, and both were fiercely assailed; but they have reared a monument more lasting than brass and loftier than the royal pyramids of Egypt. Holmes' essay is a master piece of reasoning and in his finest style of language, while Semmelweis' book on child-bed fevers must ever remain as one of the world's classics.

THE ANTIQUITY OF ACHONDROPLASIA.

To Parrot belongs the credit of directing attention to this interesting condition since named chondrodystrophia foetalis and also called micro-melia.

The late Professor Charcot wrote a book on "Deformities and Maladies in Art," in which he refers to dwarfs and idiots as existing among the ancients as shown by stone antiquities. He speaks of the achondroplastic type of deformity.

Herodotus tells us of dwarfs with big heads, crooked legs, very long arms, and long moustaches. Among the relics of ancient Egypt are statuettes that clearly point to the fact this condition existed in that country at a very remote period. There is one statuette that is regarded as exhibiting the characteristics of the achondroplastic and which is thought to date from about 4,000 B.C.

There is now no doubt about the existence of dwarfs or pigmies in Africa. But they are well-formed and clearly do not belong to the class of persons portrayed in the ancient statuettes and recognized at the present day as instances of achondroplasia.

It is interesting to note that these deformed children were regarded by the ancients, especially in Egypt, as endowed with great powers and were constituted gods of creation and the resurrection, etc. Figures of these cases were placed in the temples. A statue of an achondroplastic occupies one of the beautiful tombs in an ancient Egyptian necropolis.

THE MUNICIPAL SANATARIUM FOR TORONTO.

By the newspapers we learn that the National Sanatorium people waited upon the Board of Control, urging that the \$50,000 voted by the ratepayers of Toronto sometime ago should be handed over to them.

Mr. Gage said the passage of the by-law was largely due to the work of the National Sanatorium Association.

This is not the case. The vote was got before the people through the efforts of Dr. E. J. Barrick and his supporters and was entirely for a municipal sanatorium. On this matter there can be no doubt. It would be a gross breach of faith to apply the money in any other way than that intended by the vote of the citizens.

If our memory serves us aright the advocates of the National Sanatorium Association tried to block the submission of the by-law to the people, using as an argument that the city need not do what the association was going to do. Now the association comes along and asks for the money.

But we think it would not be in the interests of the city, nor the profession of the city. Toronto should have and will have a sanatorium for consumptives of its own, and the beginning may just as well be now. In good faith the citizens voted \$50,000 for this purpose. True, there were certain conditions attached to the vote, but these conditions are being complied with and will be fully complied with in course of a short time. If the Toronto Board of Health would only act in this matter and co-operate with the Toronto Anti-tubercular League, the whole matter would be speedily accomplished, and Toronto would have a sanatorium of its own.

But we contend that it would be bad business to hand over the money to the National Sanatorium Association. The whole tendency at the present day is towards municipal ownership. We have no hesitation in saying that this is the only true policy so far as this important question is concerned.

In the interests of the profession of Toronto we also maintain that this is the proper course. This sanatorium must be located in a healthy place, but which must be so located that the medical men of Toronto may visit it without too heavy a drain upon their time. The institution must be a public one in the truest sense. It must be free to the members of the profession to attend patients if they so desire.

Then, further, if the institution is under municipal control, it could be enlarged from time to time as experience pointed to be necessary. This could hardly be said of an institution under any system of management over which the city had not control.

But it strikes us that it would be absolutely illegal to hand the money over to a private corporation or association. In such a matter as this there must be the most complete assurance of stability and permanency, and this no association can give. Until this is possible, it would be entirely wrong to give \$50,000 of the people's money to such an association, however worthy it may be.

PERSONAL AND NEWS ITEMS.

Dr. O. M. Jones, of Vancouver, has gone to California for his health.

Dr. McArthur, of Ottawa, has gone via New York to Bermuda for a trip.

Dr. Tolmie, of Montreal, has gone to Holmfield, Man., where he will engage in practice.

Dr. Dickson, of Pembroke, has gone to Harrisburg, Oregon, where he intends locating.

Dr. D. S. Hoig, of Oshawa, has been appointed an associate coroner for Ontario County.

Dr. Meek, of London, has gone for a trip to the Mediterranean and the south of France.

Dr. Stevenson, of Moosomin, has been very ill for some time with an attack of typhoid fever.

Dr. Moore, of Fort Frances, was ill with a severe attack of pneumonia, but has again recovered.

Dr. G. N. Brodie has sold his practice in Didsbury, Alberta, and is about to locate in Port Arthur.

Dr. D. B. Bentley, of Sarnia, was confined to the general hospital with an attack of appendicitis.

Dr. Wilbert McLellan, of Ramsey, has gone to England to take a post graduate course in medicine.

Dr. L. L. Stauffer has taken possession of the office and practice of Dr. L. E. Rice, of New Dundee.

Dr. G. F. L. Fuller, of Cowansville, was very ill with pneumonia in the early part of last month, but is improving.

Dr. and Mrs. James MacCullum have sailed for England and the continent, and will be absent some months.

Dr. G. N. Brodie, formerly of Claremont has sold his practice in Didsbury, Alberta, and is about to locate in Port Arthur.

A short time ago word was received of the sudden death of Dr. M. W. Peters, an old Wentworth boy, at Owosso, Mich.

Dr. Turnbull of St. Boniface hospital staff was confined to St. Roch isolation hospital on account of an attack of diphtheria.

Dr. Meikle, of Mount Forest, who was operated upon a few days ago for acute appendicitis at the General Hospital, is doing nicely.

Dr. Shadd, having finished his studies in the Royal Infirmary of Edinburgh, sailed from England on February 24 and returned to Melfort.

Dr. C. E. Duggan, of Oil Springs, left for Queenston, where he will practise his profession. His many friends will wish him every success.

Dr. E. G. Carder, who has been visiting his parents at Toronto, left two weeks ago for New York. Dr. Carder intends visiting London, England.

Dr. and Mrs. Parfitt, of Gravenhurst, paid a visit a short time ago to Hamilton, where he addressed the Medical Society on the work of the sanatorium.

Dr. H. L. Dickey, formerly of Charlottetown, has been appointed surgeon by the Dominion government, and will have full charge of the government detention hospital at Halifax.

Dr. and Mrs. Graham, who have been residing in Alberta for the past year or so, have returned to Brussels and will make their home there. Dr. Graham purposes resuming practice in Brussels.

His physician having ordered Dr. Brown, of Aylmer to take a rest and a change from his present work, he has sold his business to Dr. Mackie, of Springfield, who will move there on May 1st.

Dr. W. H. B. Aikins sent the Editor of THE CANADA LANCET a card from Old Gibraltar stating that he would soon be in Vienna, where he purposes staying for some time in the study of pathology.

Dr. John G. Gunn, who has been on the staff of the London asylum, has resigned his position, and for the next three months will take charge of Dr. Meek's practice at Port Rowan during the latter's absence in Europe.

There has been quite a sensation in Mr. J. P. Morgan's lying-in hospital in New York. It appears that many of the staff and some of the governors objected to certain methods of management, and have handed in their resignations.

Dr. George H. Duncan, one of Victoria's leading practitioners, was seriously and probably fatally injured recently in a runaway accident occurring while he was making his professional round of calls with little twelve-year-old Mabel Booz as a driving companion.

Dr. R. J. Gardiner, who has been in Toronto since last November, has gone into practice with Dr. A. R. Pyne, in succession to Dr. Pyne, now Minister of Education in Ontario, who has been obliged to relinquish his practice owing to his being called to the Ontario Cabinet.

Dr. Manchester has handed over the keys of the provincial asylum, B.C., to his successor in office, Dr. Doherty, who has now taken charge of the institution. Dr. Manchester will practice medicine in Vancouver. From 1895 to 1899 Dr. Manchester was assistant to Dr. Burgess at the Verdun Asylum, Montreal.

Dr. L. E. Rice, of New Dundee, who has announced his intention of seeking new worlds to conquer, was tendered a farewell banquet on Sat-

urday evening, at Chipman's Hall. The banquet was one of the most pleasant of its kind ever held in New Dundee, old and young assembling to honor the popular doctor.

Dr. Duncan Anderson, of Toronto, has recovered from an operation for appendicitis, which he underwent at the General Hospital a short time ago. Dr. Anderson was attacked very suddenly. He was in attendance at an operation in the morning and in less than twelve hours he was himself on the operating table.

The Medical Faculty of Laval University held their annual banquet at the Queen's Hotel, Montreal, and it proved one of the most successful yet held by the faculty. Among the invited guests were the professors of the faculty, representatives of the University and delegates from different sister faculties in Montreal and Quebec.

The many friends of Dr. Niel J. Maclean, who has been taking a special course in surgery at the large London Hospitals, will be pleased to know that he has qualified as Licentiate of the Royal College of Physicians and a Member of the Royal College of Surgeons, London, England. After visiting the hospitals of Berlin and Vienna, the doctor will return to attend his practice in Winnipeg.

A new company, under the name of the Chandler & Mills Company was formed lately, with an authorized capital of \$50,000. It will open up a stock of physicians, surgeons and hospital supplies on April 1, on Beaver Hall hill, Montreal. Among the shareholders are forty-six physicians of the province; Mr. John Pitblado is president; Dr. George Fiske, vice-president; Mr. Fred H. Markey, secretary-treasurer; Dr. J. U. Lalonde and Dr. C. O. Cyphiot, directors.

Dr. W. E. Struthers, of Lanark, has disposed of his medical business to Dr. J. E. Klotz, of Middleville. The doctor finds his health unable to stand the rigors of a country practice and will move to a less arduous place in the city of Toronto. The incoming practitioner, Dr. J. E. Klotz, graduated with Dr. Struthers. He spent his first year in Middleville, then went to the Old Country, where he studied in the hospitals. Subsequently Dr. Klotz went to the Pacific Coast.

The announcement has been made at Westminster, B.C., that Dr. Doherty, who had been assistant superintendent at the provincial Asylum for the insane, had been appointed by Hon. F. J. Fulton to be superintendent in the place of Dr. Manchester. The latter occupied the position for a number of years. Dr. Manchester said that after taking a holiday he will make a trip to New York or London to take a special course in the study of nervous diseases, and will return next year to the West to locate permanently in Vancouver.

OBITUARY.

PHILIP CHISHOLM, M.D.

The death occurred at Loch Lomond, C. B., on the 10th March, of Dr. Philip Chisholm, the oldest resident of Cape Breton. Dr. Chisholm was born at Loch Charron, Rosshire, Scotland, 102 years ago last June, and he came to Nova Scotia in 1821. His surgical skill was in much demand over a large stretch of country, physicians being few and far between through the country in his early days.

N. AGNEW, M.D.

Dr. N. Agnew, who was a well known citizen of Winnipeg in its early days, passed away on 3rd March, in St. Paul, Minn., where he had gone to visit two of his sons, who reside there, in the hope that the change would benefit his failing health.

The late Dr. Agnew went to Winnipeg with the first active rush of immigration from eastern Canada in 1878, and practised his profession in the city for several years. He evinced a keen interest in the sanitary affairs of the corporation and wrote and spoke extensively on the subject. In 1886 he removed to Brandon, where he had since resided. He was a specialist in eye, ear and throat diseases. He was in his 77th year. He is survived by his wife, four sons and two daughters, and a step-daughter. His eldest son is Hon. J. H. Agnew, provincial treasurer for Manitoba.

BOOK REVIEWS.

CONGENITAL DISLOCATION OF THE HIP.

By J. Jackson Clark, M.B., Lond., F.R.C.S., Surgeon to the North-West London Hospital, and to the City of London Orthopædic Hospital. Formerly Senior Demonstrator of Anatomy, Pathologist, and Curator of the Museum at St. Mary's Hospital. Second edition. Reprinted with Additions, from "The Practitioner." London: The Practitioner Co., Ltd., 149 Strand, W. C. January, 1905. Price 1s. 6d. net.

This octavo pamphlet of 37 pages, containing 11 full page plates with 26 figures, is an excellent review of the subject of congenital dislocation of the hip. The author is a surgeon of high standing, especially among those who take an interest in orthopædic work. Mr. Clarke is quite enthusiastic about his results and the usefulness of the Lorenz method of treating congenital dislocation of the hip. The author attaches the utmost

importance as to the details and exactness in the methods of operating. He claims that one must learn the manipulations from an experienced person and not attempt the operation by studying written descriptions. The pamphlet will well repay a careful perusal.

A BOOK ABOUT DOCTORS.

A Book About Doctors. By John Cordy Jeaffreson. Author of "The Real Lord Byron," "The Real Shelley," "A Book About Lawyers," etc., etc. 1904. The Saalfeld Publishing Company, New York, Akron, O., and Chicago; and Chandler and Massey, Toronto. Price, \$2.50.

This volume belongs to the Doctor's Recreation Series, edited by Mr. Moulton. It is got up in the same perfect style as the previous volumes of the series. The paper, typography, binding and illustrations are just about as one could well imagine them to be. Interesting as the mechanical and artistic make up of the book is, it is in the literary part that one is naturally most interested. The book consists of over 500 pages, divided among 27 chapters, of which it would be impossible to find a weak one. The author has arranged his material with much skill, and the reader glides on from page to page, and from chapter to chapter with an ever-increasing relish for what he has read and a growing desire for more. A Book About the Doctor! What a subject, and how beautifully handled withal! Some books we read because we must read them, but this one we read because we cannot help reading it. This book is not only intensely interesting, but it is equally instructive. It was once said of a certain book that the true things were not new, and the new things were not true. The reverse is true of this book: for the new things are really true and old things are told with such piquancy as to be thoroughly new. The pretty side lights that are thrown upon the Days of Sticks and Wigs, Old English Physicians, Sir Thomas Brown and Kenelm Digby, The Apothecaries, Samuel Garth, Quacks, Radcliffe, Bleeding, Richard Mead, Imagination as a Remedial Power, Mesmer, Akenside, Lettsom, The Loves and Quarrels of Physicians, The Country Doctor, etc., would afford amusement for many an hour, and are strong enough to keep one out of bed far beyond the usual hour. Let us quote of good old Lettsom:

When patients sick to me apply,
I physics, bleeds and sweats 'em;
Then—if they choose to die,
What's that to me—I lets 'em.

In speaking of Fees, the author tells a good story about Sir Astley Cooper, to the effect that he attended a West Indian millionaire. When the patient was convalescent he sat up in bed one day and threw his night

cap at Sir Astley and said, "Take that." "I'll pocket the affront," said Cooper. When he examined the cap it contained a check for 1,000 guineas.

But there is no end of good things in the book. Let us close with what Sir John Hill said of a certain character:—

"For physics and farces
His equal there scarce is;
His farces are physic,
His physic a farce is."

INTERNATIONAL CLINICS.

A Quarterly of Illustrated Clinical Lectures, and especially prepared Original Articles on Treatment, Medicine, Surgery, etc., etc. Edited by A. O. J. Kelly, A.M., M.D. Philadelphia: J. B. Lippincott Company; Canada: Mr. Roberts, Ontario St., Montreal. Price \$2.25. Vol. IV. Fourteenth Series, 1905.

These quarterly volumes need no introduction now, as they have become familiar to every physician, and are as respected as they are familiar. The present volume is full of timely and able articles upon treatment, medicine, surgery, gynaecology, neurology and pathology. The two articles on pathology—on infectious diseases and amoebic infection—are of very special importance. The volume is well illustrated, there being some fifty plates and a number of figures. We can speak very highly of this volume of an excellent series.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Transactions of the American Dermatological Association, at its 28th Annual Meeting, held at Niagara Falls, N. Y., June, 1904. Official Report of the Proceedings, by Charles J. White, M.D., Secretary. The Grafton Press, New York.

This volume of the proceedings of the above Association contains a number of excellent papers and some very fine illustrations. The book is got out in good form. It will certainly prove interesting to the members of the Association, and to such others as may secure a copy.

A TEXT-BOOK OF LEGAL MEDICINE.

By Frank Winthrop Draper, A.M., M.D., Professor of Legal Medicine in Harvard University; Medical Examiner for the County of Suffolk, Massachusetts. Octavo volume of 573 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1905. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. Cloth, \$4.00 net.

The subject of Legal Medicine is one of great importance, especially to the general practitioner, for it is to him that calls to attend cases which may prove to be medicolegal in character most frequently

come. Dr. Draper has written his work both for the general practitioner and for the medical student. He has not only cited illustrative cases from standard treatises on forensic medicine, but these he has supplemented with details from his own exceptionally full experience—an experience gained during his service as Medical Examiner for the City of Boston for the past twenty-six years. During this time his investigations have comprised nearly eight thousand deaths under a suspicion of violence. The author's long teaching career has enabled him to state facts and detail procedures with a clearness rarely met in a work on Legal Medicine. Withal, we think Dr. Draper's book is unusually satisfactory; it is more,—it surpasses our expectations.

ATLAS AND EPITOME OF OPERATIVE OPHTHALMOLOGY.

By Dr. O. Haab, of Zürich. Edited, with additions, by George E. de Schweinitz, M.D., Professor of Ophthalmology in the University of Pennsylvania. With 30 colored lithographic plates, 154 text-cuts, and 377 pages of text. Philadelphia, New York, London: W. B. Saunders & Company, 1905. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. Cloth, \$3.50 net.

This new volume forms an admirable conclusion of the series of atlases on the Eye prepared by Professor Haab. Beginning with a thorough discussion of the proper construction of operation-rooms, narcosis, sterilization as applied to ophthalmic instruments, and disinfection, ophthalmic operations are described with all the fidelity and clearness that thirty years' conscientious practice in eye work naturally brings. The colored illustrations exhibit the same perfection of art and accurateness of detail which we have found only in this invaluable series of atlases. We note that the able editor, Dr. de Schweinitz, has rendered the volume much more valuable by his many additions throughout the text. Any one interested in eye work will find this book of more value than any other volume recently published.

BACTERIOLOGY AND SURGICAL TECHNIC FOR NURSES.

By Emily M. A. Stoney, Superintendent of the Training School for Nurses, St. Anthony's Hospital, Rock Island, Ill. Second Edition, Thoroughly Revised and Much Enlarged by Frederic R. Griffith, M.D., Surgeon, Fellow of the New York Academy of Medicine. 12mo volume of 278 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1905. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto. Cloth, \$1.50 net.

The revision for the second edition of this practical work has been most thorough and extensive, the book having been increased in size by the addition of over 80 pages and many cuts. Dr. Frederic R. Griffith, to whom the work of revision was intrusted, has wisely added several

chapters of unquestionable importance: namely, Bandaging and Dressings; Obstetric Nursing, Care of Infants, etc.; Hygiene and Personal Conduct of the Nurse, etc. Nurses will find the glossary at the back of much value. As a whole we think it a compact, useful book, pregnant with just the information that nurses most and constantly need.

MODERN OPHTHALMOLOGY.

A Practical Treatise on the Anatomy, Physiology, and Diseases of the Eye. By James Moores Ball, M. D., Professor of Ophthalmology in the St. Louis College of Physicians and Surgeons. With 417 Illustrations in the Text and Numerous Figures on 21 Colored Plates, nearly all Original. 820 Pages, Extra Large Royal Octavo. Price, Extra Cloth, \$7.00, net; Half-morocco, \$8.50, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This is a magnificent work of 800 pages, admirably printed and illustrated both by cuts and colored plates, the majority of the latter being new and original drawings in colour by Miss Margaretta Washington. The colored plates illustrating the external diseases of the eye are the best and most natural in tone of any the writer remembers to have seen. The book itself is thoroughly up to date and is to be commended both from literary and technical standpoints.

POLITICS IN NEW ZEALAND.

Being the chief portions of the Political parts of the book entitled "The Story of New Zealand" selected and arranged by C.F. Taylor, M.D., Editor of the *Medical World*. Price 25 cents. Published by Dr. C. F. Taylor, 1520 Chestnut Street, Philadelphia.

This little book is prepared by a doctor and with the object in view of placing within the doctors' reach a very complete, though concise, account of the wonderful political development of New Zealand, which has far outstripped the rest of the world. It is a most interesting little book.

BLOOD, URINE, FAECES AND MOISTURE.

A Book of Tests by Henry Emerson Wetherill, M.D. Published by George P. Pillings & Son. Philadelphia, U.S.

This book gives five beautiful plates. One for ante-mortem blood colors, one for post-mortem blood colors, one for urine, one moisture, and one for faeces. Carefully prepared explanations accompany these plates. The colors are very delicately expressed. By comparing a sample of blood, urine, or faeces with these plates the exact color can at once be determined. The book is furnished a supply of paper discs for making the tests.

ATLAS AND EPITOME OF GENERAL PATHOLOGIC HISTOLOGY.

By Dr. H. Durck, of Munich. Edited, with additions, by Ludvig Hektoen, M.D., Professor of Pathology, Rush Medical College, in affiliation with the University of Chicago. With 172 colored figures on 77 lithographic plates 36 text-cuts, many in colors, and 371 pages of text. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, \$5.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This new atlas in Saunders' Medical Hand-Atlases is indeed a worthy addition to the series. All the accepted views regarding the significance of pathologic processes have been concisely stated, conflicting theories having been wisely omitted. The illustrations have been made from original specimens without combining different microscopic fields, extraordinary care having been taken to reproduce them as near perfection as possible. In many cases as high as twenty-six colors have been required to reproduce the original painting. In editing the volume, Dr. Hektoen has incorporated much useful matter; and unquestionably this atlas will be as favorably received as the previous volumes on Special Pathologic Histology. In our opinion, it will be found of unusual value to the medical profession generally.

GALLSTONES AND THEIR SURGICAL TREATMENT.

By B. G. A. Moynihan, M.S., (Lond.), F.R.C.S., Senior Assistant Surgeon to Leeds General Infirmary, England. Octavo volume of 386 pages, illustrated with text-cuts, some in colors, and nine colored insert plates. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, \$4.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

The great and increasing importance of the subject of gallstone disease is a sufficient warrant for the publication of this forelying work, and Mr. Moynihan's extensive experience in treating cholelithiasis specially fits him to write an authoritative and trustworthy work such as we have found this. A full account is given of the origin and causation of gallstones, and of the pathologic changes and clinical manifestations to which they give rise. Special attention has been paid to the detailed description of the early symptoms of cholelithiasis, enabling a diagnosis to be made in the stage in which surgical treatment can be most safely adopted. Every phase of gallstone disease is dealt with, and is illustrated by a large number of clinical records. The account of the operative treatment of all the forms and complications is full and accurate. The beautiful illustrations, a number of which are in color, including nine insert plates, are unusually clear and artistic, and form a special feature. We know of no book on the same subject that can in any way compare with Mr. Moynihan's work.

DIET IN HEALTH AND DISEASE.

By Julius Friedenwald, M.D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Octavo volume of 689 pages. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, \$4.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This latest work on diet is practical and comprehensive, prepared to meet the needs of the general practitioner, medical student, hospital interne, and trained nurse. It contains a full account of food stuffs, their uses and chemical compositions. Dietetic management in all diseases in which diet plays a part in treatment is carefully considered, the articles on diet in diseases of the digestive organs containing numerous diet lists and explicit instructions for administering. The feeding of infants and children of patients before and after anesthesia and surgical operations, and the latest methods for feeding after gastro-intestinal operations have never before been discussed with such practical detail. The subject of rectal enemata is given completely, with recipes and full instructions as to technic. Diet is considered in its relations to age, occupation, and environment; and the beneficial results from the rest cure have been accorded prominent consideration. There is also a section on food adulteration and the resultant diseases. Withal, this is a work well worthy the reputation of its authors, and we most cheerfully recommend it.

DISEASES OF THE LIVER, GALL-BLADDER, AND BILE-DUCTS.

By H. D. Rolleston, A.M., M.D., (Cantab.), F.R.C.P., Physician to St. George's Hospital, London; formerly Examiner in Medicine at the University of Durham, England. Octavo volume of 794 pages, fully illustrated, including seven colored insert plates. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Cloth, \$6.00 net. Canadian Agents: J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

Dr. Rolleston's new work is undoubtedly the most voluminous treatise on diseases of the liver yet published in English. And more than that, it is destined to become an authority on the subjects of which it treats. The author has for many years made a special study of diseases of the digestive system, and his reputation in the treatment of hepatic diseases is sufficient assurance of the practical usefulness of this new work. The text includes all the affections of the liver, completely and clearly discussed, special attention being given to pathology and treatment. A large number of clinical cases are quoted, which will be found of great value to the practitioner in diagnosing individual cases. Besides Diseases of the Liver, the book contains articles on Diseases of the Gall-Bladder and

Bile-Ducts, which are equally as trustworthy and authoritative as the section on the Liver. The illustrations, both those showing gross appearances and the microphotographs, are unusually excellent, and include seven colored insert plates of great merit. The mechanical appearance of the work is in keeping with the high standard of the text.

MISCECLLANEOUS.

“PAINFUL MENSTRUATION IN VIRGINS.”

Dr. Wm. Sellman, of Baltimore, read this paper and pointed out the necessity of giving relief to young unmarried women who suffered from painful menstruation. He considered the forms of dysmenorrhœa that could be relieved by operation. These means should not be of a character to unsex the patient. Lastly he spoke of that class of cases in which dysmenorrhœa was due to a general systematic neuralgia. In these cases, electricity in its different forms afforded great relief. It was doubtful in many of these cases whether the removal of the appendages would accomplish anything more than bring about a premature menopause.

Dr. H. W. Longyear, of Detroit, stated that in operating, if one ovary or a part of an ovary could be saved he did so. He would enter a protest against operating on cases of dysmenorrhœa that were of short duration in young girls..

Dr. William Humiston, of Cleveland, Ohio, had seen cases with a narrow, conical os, menstruating without the least sign of distress, but the moment an inflammatory condition of the mucosa was added, that moment the patient began to have painful menstruation.

Dr. D. Tod Gillian, Columbus, Ohio, spoke of the undeveloped condition of the uterus as a cause of dysmenorrhœa. It was not the result of stenosis of the internal os, but to an unripe condition of the uterine tissues.—*Med. Review of Reviews*.

The thing that surprises us most in the above article is that not a single voice was raised to proclaim the almost magical effects of antikamnia tablets in such cases. We can readily recall quite a number of cases in which extreme suffering (dysmenorrhœa) was promptly relieved, not by operation, but by antikamnia tablets. Evidently these men were surgeons only.—*Ed. Massachusetts Med. Jour.*, January, 1905.

BROMIDIA AND ITS USES.

Dr. H. B. Shade, late editor North American Medical Review, in an article as to how to manage nervous and spasmodic affections successfully, (Medical Progress) in part says :

All I think of taking with me on a night call is bromidia and papine, in addition to my pocket case. It matters not whether I find a case of cramp colic, hysteria, spasms, insomnia, dementia, hypocondriasis, croup, spasmodic asthma, abortion, a fracture, neuralgia, rheumatism, cholera infantum, or what not, for in bromidia I find a remedy that can be relied upon in all cases where the muscular, mucous, or nervous system are out of harmony. In many cases I find papine should be prescribed with bromidia where severe pain accompanies nervous conditions, insomnia, appendicitis, cramp colic, fractures, surgical operations, etc. In all cases where morphia is indicated, I find in many cases insomnia and nervous conditions accompanied by pain, incident to rheumatism, etc., bromidia and papine act admirably, given in teaspoonful doses before retiring. No bad effects follow, no constipation, no nausea, no checking of the secretions, so that the business traffic of the system is not interfered with whatever.

A CASE OF PNEUMONIA FOLLOWING SEVERE TYPHOID.

J. B. W., white, male, age 30 years was recovering from a severe case of typhoid. On the 36th day his temperature was normal. On the 39th day it again began to rise and in a few days had reached 104.5, the pulse 140. A severe cough and consolidation of the right lung told the story of a complicating pneumonia. After the long and severe drain upon his resources incident to the typhoid his condition presented a very alarming, not say, desperate situation.

Counsel was called and it was decided that his only hope lay in the generous use of Antiphlogistine. A "Large" package was secured and heated by placing the sealed can in hot water. The temperature of the room was brought up to about 80 degrees. A cotton lined cheese-cloth jacket, open upon the shoulders and in front was prepared and warmed. Uncovering the patient's thorax, Antiphlogistine as hot as could be borne was spread upon the skin about $\frac{1}{8}$ inch thick over as much of the thoracic walls as could be reached (back, front, side and over the shoulder). This was covered with the jacket. Turning the patient over, the other side was dressed in the same way. The jacket was then drawn together over the shoulders and down the front with stout thread. It is proper to say the entire contents of the 34 $\frac{1}{2}$ ounce package (Large) was used for the one dressing.

The effect was surprisingly prompt. In a few hours, the temperature had declined to a point of safety and the pulse to 120. A similar dressing was applied fresh every 24 hours. The improvement was steady and marked and in six days the patient was again convalescent, thanks to Antiphlogistine.

The brilliant outcome in this case taught me the importance of careful attention to detail in the use of Antiphlogistine. Like every thing else worth while it must be properly used if the best results are to be obtained.

WHERE TRUE QUALITY IS SHOWN.

The excellence of Scott's Emulsion is recognized by the highest authority. The *London Lancet* said of it : "The value of the hypophosphites combined with cod liver oil, especially in wasting diseases and debilitated conditions, is well known. In addition to these constituents, Scott's Emulsion also contains glycerine, which is well recognized as assisting very materially in the absorption of oils and fats. We have examined the preparation with care, and find that it fulfills all the requirements and presents all the conditions of a very satisfactory emulsion. In appearance and consistence it is not unlike cream, and under the microscope the fat globules are seen to be of perfectly regular size and uniformly distributed. In fact, the preparation, microscopically examined, presents the appearance of cream. So well has the oil been emulsified that even when shaken with water the fat is slow to separate, the liquid then looking like milk. The taste is decidedly unobjectionable and is pleasantly aromatic and saline. We had no difficulty in recognizing the presence of the hypophosphites in an unimpaired state. The Emulsion keeps well even when exposed to wide changes of temperature. Under the circumstances just described the Emulsion should prove an excellent food as well as a tonic."

THE CAUSE OF DIABETES.

When in 1848 Claude Bernard discovered the glycogenic function of the liver, the physicians thought they had at last arrived at a true knowledge of the cause of diabetes, but as the years passed by the problem remained unsolved. We are now perhaps a little nearer to the truth than we were then. We know now that the pancreas and the muscular system have much to do with the etiology of diabetes.

Bouchardat in 1885 was among the first to call attention to the frequency of pancreatic lesions in subjects having died from diabetes. In 1889 Von Mering and Minchowski ascertained that if we extirpate the whole of the pancreatic gland in an animal, the latter immediately shows

signs of very severe diabetes, with the presence in the urine of diacetic acid, of acetone and of oxybutyric acid, just as it appears in man in the most severe cases. Moreover in this experimental diabetes, abstention from carbohydrates does not stop the glycosuria, and nitrogen appears in the urine in an increased quantity; facts going to show that the constituent albumen itself is broken down and converted into sugar.

The experiments of others demonstrate that the pancreatic secretion has certain effects independent of its quantity, and that its action is not according to the principles which govern the other secretions. If only one quarter or even one fifth of the pancreas is left in the body, no diabetes occurs, and if the whole of the pancreas is excised but a piece of it is engrafted under the skin or implanted in the peritoneal cavity, that also will suffice to prevent diabetes.

This shows that in the pancreas there is something which is different from the other secretions and which can prevent diabetes. Opie has shown that the lesions of the pancreas may not be accompanied by diabetes provided that the textural changes do not involve the integrity of the islands of Langerhans, but if they do involve them, diabetes then occurs at least in seven out of nine cases. These islands of Langerhans are constituted by a class of cells grouped in little islands imbedded in the substance of the pancreas and contribute nothing to the quantity of pancreatic juice secreted, but instead seem to add directly to the blood a substance which prevents death from the dread disease diabetes.

Nevertheless cases are reported of the total destruction of the pancreas, by cancer for example, and yet without any diabetes. Moreover, Naunyn, one of the most attentive of observers, in a series of forty necropsies of diabetic subjects, found only one case in which the malady could be ascribed to disease of the pancreas.

All this shows that the pancreas alone, not any more than the liver alone, can explain every case of diabetes. There is more than one factor which enter into this most complex problem of the utilisation of the carbohydrates in the living body.

Lately the researches of Otto Cohnheim have shown that an enzyme is produced in muscle which of itself does not act on sugar, but when mixed with the secretions of the cells of Langerhans becomes a very energetic solvent, in the same way that trypsin becomes effective only when conjoined with the kymase ferment in the intestine.

This muscle ferment is so energetic when mixed with the juice of the pancreas that Cohnheim regards it as quite sufficient to account for the whole process of sugar combustion in the human body, under normal conditions.

These new facts corroborate very well what has been known for some time. The facts which we did know were that the muscular tissues were the chief generators of animal heat,, and that quite apart from their function of contraction and relaxation was their function of oxydation, and for this reason the blood collected frm the veins of a large muscle like the glutaesus, even though the muscle was at perfect rest, yet contains less oxygen and more carbon dioxide than the blood of the right ventricle itself.

This shows the extent of the combustion of the blood contents when the blood is coursing through the muscular tissue ; and as the chief material for such oxydation consists of carbodhydrates, any failure in this muscular function might have much to do with the pathological failure of sugar oxydation in diabetes.

Lacto-globulin has been used in diabetes with much advantage.

SANMETTO NOT A PATENT MEDICINE.

(Copy of a Letter.)

The following has been sent with the request for its publication :—

New York, Jan. 20, 1905.

C. J. Fagan, M.D.,
Victoria, B.C.,
Canada.

Dear Doctor,—We advertise our preparation, Sanmetto, in the Canada Lancet, published in Toronto. In glancing through the pages of this January issue our eyes happened to light upon an article entitled "Patent Medicines," "By C. J. Fagan, M.D., Victoria," purporting to have been read at the Vancouver meeting of the Canadian Medical Association, August, 1904.

Towards the close of the article the following language is published : "Recently it has been stated in the daily papers that alcohol is present in large quantities in patent medicines. I have thought it my duty to inquire into this and therefore looked over the advertisements in several papers and picked out some of the best known mixtures. I have taken from local advertisements the following and examined same for alcohol and found the following percentages." Among the list we notice Sanmetto mentioned.

Now, inasmuch as Sanmetto is not a patent medicine and has never appeared in any local advertisements, or in any papers intended for the lay public, but, on the contrary, is a strictly ethical preparation intended for use under the directions and prescriptions of physicians, and exclusively advertised to the medical profession, we are led to believe that in the original paper which you read before the Canadian Medical Association

our preparation, Sanmetto, was not mentioned, because a preparation that is so extensively and favorably known and prescribed by physicians throughout Canada and the States as a preparation intended exclusively for use in their practice, and placed upon the market in packages without a scintilla of information as to its purposes, or how to be used, could not have been classified by you among what are known as "patent" medicines.

We believe that no manufacturing chemists have ever taken more pains in confining any preparation, its therapeutic virtues and methods of use, strictly to the medical profession than ourselves with Sanmetto. Indeed, we know of no other preparation of an eth-pharmal character that is marketed without a scrap or word as to its indications or dosage or purposes whatever.

This policy we adopted from the beginning and against the advices of some of our friends and experts in the drug business, and for our persistency in which, we have met with objections from many of our retail drug friends. With Sanmetto so long and so favorably known and used by the medical profession, and with its unprecedented endorsements from thousands of the most respectable physicians, and peers with any, we can hardly believe that you would have done us this gross injustice, and have come to the conclusion that it was maliciously inserted by some one else after the paper left your possession.

However, if for any reason you have done this, then we believe you will have the manliness to tell us so and your reasons for doing it.

Very truly yours,

OD CHEM. CO.

(Sgd.) M. HAMAN, Pres

IN PROMOTING NUTRITION

Angier's Petroleum Emulsion has a most positive value in the treatment of cases associated with progressive loss of flesh, either as an accompaniment of organic or infectious disease, or existing without discoverable cause. Its value in these cases is due to its reinforcing influence upon the normal processes of digestion, assimilation, and nutrition, whereby the system is enabled to utilise to the full extent all forms of nutriment.

THE ANTIPHLOGISTINE BOOKLET.

The Denver Chemical Company have just issued an extremely attractive little pamphlet on the uses of antiphlogistine in the treatment of inflammations. The pamphlet is got out in very fine form. The paper is excellent and the numerous illustrations in three colors are perfect.

CHARLES O'REILLY, M.D., C.M.,
MEDICAL SUPERINTENDENT OF THE TORONTO GENERAL HOSPITAL, 1875-1905.

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FEVER IN PUERPERIUM.

By KENNEDY C. McILWRAITH, M.B.,

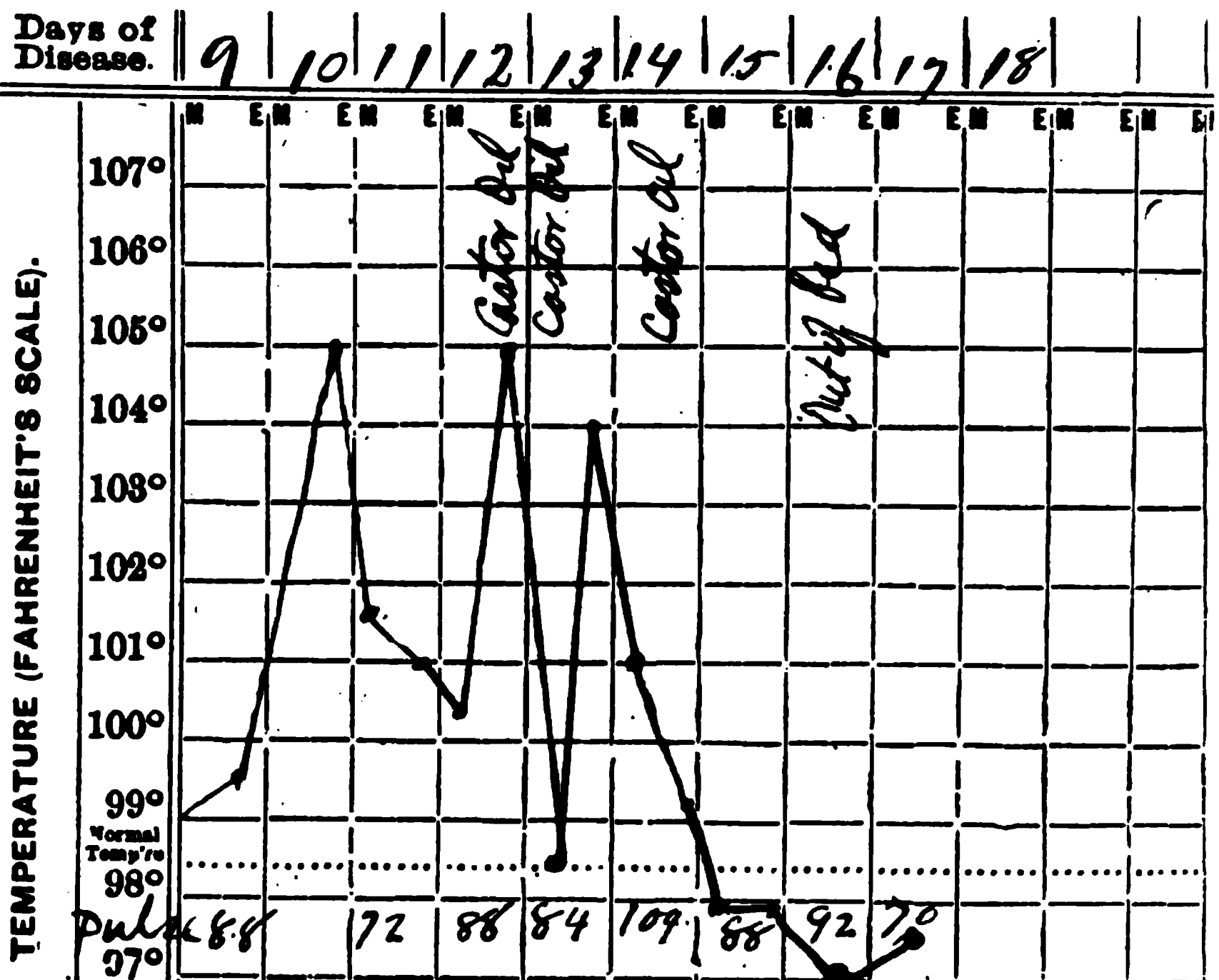
Associate in Obstetrics, University of Toronto.

POST equitem sedet atra cura." The physician carries many a care on his rounds, but none that is more wearing than the consciousness of a febrile puerperium in his practice. I have chosen a wider subject than puerperal sepsis, because, though much has been written on different causes of post-partum fever, sufficient attention has not been paid to the diagnosis of one from another. The first question that arises is not, "What is the best treatment for puerperal sepsis?" but, "Is this sepsis, and, if not, what is it?" I cannot pretend to offer a solution for all the knotty problems which arise in this connection, but hope that the readers of THE LANCET may find something of interest in these few observations.

When the temperature rises post-partum, endeavor to arrive at a diagnosis by a process of exclusion. What may the cause be? Let me give a list, placing the graver causes last: "Reaction," intestinal, bladder, emotion, nipples, breasts, intercurrent diseases, stitches, first getting up, post-eclamptic, crowded wards, sapræmia, septicaemia.

"Reaction."—In a large percentage of cases there is a rise of temperature to 99 degrees or even to 100 degrees within the first 24 hours after labor. If the labor has been very severe, the "reaction" may be correspondingly severe, and the temperature may rise to 101 degrees or even more. The points about this are that it occurs within the first 24 hours, and is not prolonged beyond that period.

Intestinal.—The whole duty of the physician has not been performed when a laxative has been prescribed and the bowels have been moved two or three times. The bowels may be repeatedly moved and yet not emptied. I have on many occasions, when trouble had arisen, found masses in the colon either by percussion or palpation, upon the elimination of which the trouble abruptly ceased. The hepatic and splenic flexures of the colon on the usual sites at which such collections form. Let me cite a case.



On the 12th day a lump was felt in the ascending colon, & castor oil; on the 13th day lump moved to splenic flexure, & castor oil; on the 14th day lump moved to sigmoid flexure, & castor oil; on the 15th day lump gone. The rest of the puerperium was uneventful. Note the sudden disappearance of the temperature, coincident with the disappearance of the lump. This woman never felt very ill, and her pulse was not as rapid as one would have expected with the temperature.

The time and mode of onset of the fever may closely simulate septic fever. Distension of the abdomen frequently accompanies the formation of such masses. The uterus may be kept higher up than usual—apparently subinvolved. There is however this great distinction that the patient seldom looks or feels as ill as a septic patient. The best means of elimination that I have found is to give repeated doses of castor oil, coupled with high enemata.

Bladder.—Increased secretion of urine is the rule after labor. One of my patients passed 200 ozs. in 24 hours early in the puerperium, and I have several times had over 100 ozs. recorded. With the expulsion of the child the tension within the abdomen is suddenly lowered. These two

factors favor distension, and when once over-distension has occurred the expulsive power of the bladder is diminished; the expulsive power of the abdominal muscles also is lessened for a time by the stretching they have undergone. In view of all these facts, it is not surprising that over-distension of the bladder should frequently occur in the earlier part of the puerperium, and I believe it occurs much more frequently than is usually supposed. Do not be content with nurse's or patient's report that the urine has been passed. You may find on further enquiry that it is being passed "every hour or two," which of course means retention with overflow; or you may find that 8 or 10 ozs. have been passed at a time, but that twice as much more may be drawn off by catheter immediately afterwards. This "residual urine" soon becomes offensive in odour, and much pain and discomfort or even cystitis result. Examine the abdomen at each visit after labor. If you find the uterus high up and pushed over to one side, push it gently in to the middle line, sink your fingers behind the fundus and hold it forward against the abdominal wall. Then palpate with the other hand from fundus to symphysis. If the bladder be empty you can feel the uterus all the way down, but if it be distended you feel a body like a more or less distended water bag. If it is not too tightly distended you can feel the contracted uterus behind by "dipping" sharply into it with the fingers. In addition to pain and discomfort this distension of the bladder may give rise to fever.

Train your nurse to watch the abdomen and pass the catheter when distension occurs, no matter how soon after labor or how frequently, if the bladder can not be emptied by natural methods. When distension has occurred and the urine is offensive in odour a useful prescription is

Urotropin
Lithiæ Citratis, āā grs. x
Infusui Buchu ad 3 ss.

Signa.—To be given in a glassful of water night and morning.

Emotional Fever.—The usual form is transitory. Any excitement may produce it. A visit from an irate parent; a disagreement with a nurse; fears about the infant, etc., etc. One of my patients had a rise of temperature to 104 degrees soon after hearing of a murder which had been committed in her neighborhood. Many cases of this kind have been recorded by various observers. Such a sudden rise may occur in a patient who had previously been doing quite well. This distinguishes it from sepsis, for sepsis never comes as a "bolt from the blue." There are always premonitory symptoms. It is less generally known that if the worry or fear or other cause remain the fever may be kept up for some time.

Nipples.—Nipples which are sore but not cracked may send up the temperature by reason of the pain and nervous excitement they produce. Wash them with boracic solution before and after nursing and anoint after nursing with a paste composed of equal parts of Bismuth Subnitrate and castor oil. Cracked nipples are a frequent source of high temperature. Apply a boracic poultice for 12 hours. Then dry out thoroughly with sterile absorbent. Then dip the flat end of a probe into pure carbolic acid. Shake till no drop hangs from the end, and then gently touch the whole surface of the crack. Repeat this every two days until the crack heals. It may be necessary to use a nipple shield for a day or two.

Breasts.—If an abscess forms in the breast it must be incised at once at the most dependent part and drained with iodoform gauze. A redness may come on the surface of the breast, without further local symptoms, when the trouble is really in the uterus. My attention was first drawn to this at Queen Charlotte's Hospital, and I have seen it frequently since.

Intercurrent Diseases.—One of the most frequent of these is influenza. There is usually a sudden high elevation of temperature and often a labial herpes.

Stitches.—When there are many stitches in the perineum the temperature may be of an up and down type until they are removed. It rarely rises above 100 degrees in the afternoon and is about 98 or 99 degrees in the morning. This may be due to absorption from the skin taking place about them, but I think it is often due to the irritation they produce, especially if they are drawn too tight. In a nervous patient the removal of the stitches may send the temperature up to 101 degrees or 102 degrees.

First Getting Up.—The first day that the patient gets up may be marked by a rise of temperature. I do not offer any explanation of this, though I have often seen it.

Post-eclamptic.—The temperature of patients who have had eclamptic convulsions sometimes remains elevated for days or even for weeks. I do not know why. Perhaps it is due to the continued presence of the poison which caused the convulsion. Perhaps it is that such patients suffer more readily than others from mild infection. Certain it is that a febrile puerperium is more frequent in them than in other patients. Two of my eclampsia patients developed signs of cavity formation in the lungs. House surgeons reported tubercle bacilli in the sputum. Yet when seen at a later date no signs of lung trouble were evident. The treatment is active elimination by calomel and salts.

Crowded Wards.—In the winter time when windows are necessarily shut if the wards of the hospital become crowded, temperatures are apt to go astray without any definite cause being assignable.

Sapraemia, Septicaemia, Gonorrhoea.—We have now to discuss sapraemia, septicaemia and that "tertium quid," gonorrhoea. Is it sapraemia, septicaemia or both? This is the point at which bacteriology should help us, but unfortunately the aid from this source is as yet but feeble. If we find gonococci in the lochia, we have information which may guide treatment to some extent. Streptococcus in pure culture in the lochia or in the blood confirms us in the use of anti-streptococcic serum. This is practically all.

In the *British Medical Journal* for March last, Mr. Arnold Lea of Manchester, says, amongst other things: "If the lochia contains streptococci a diagnosis of streptococcic infection may be made. We have, however, no means of estimating the gravity of the infection or the depth of the invasion. No fewer than nine varieties of streptococci have been isolated from the uterus; some of these are not pathogenic, and the recognition of the type present is difficult and cannot be relied upon clinically." I agree with all this except the first sentence. Like the small boy in the orchard, the presence of the strptococci in the lochia is suspicious, but after all they may be doing no harm. Again the same author says: "If anaerobic bacteria only are discovered the case is one of putrid endometritis. This is often associated with decomposition of clots, placenta or decidua, and these cases have been regarded as sapraemia or absorptive fever." This does not help us much, however, for: "It has been definitely proven that these organisms are capable of producing generalized infection even in the absence of pyogenic bacteria. If, however, these are present, such as streptococci or bacterium coli, the synthesis greatly increases the intensity of the infection." For our diagnosis and prognosis we are still chiefly dependent on more direct clinical observation.

Symptoms Common to Sapraemia and Septicaemia.—The first symptoms, usually appearing in 24 hours, are headache, rapid pulse, sleeplessness, general malaise, poor appetite, definite chills or slight feelings of chilliness, and last but not least the general appearance of the patient. Does she look ill? On the second day there may be some increase in these symptoms, and about the third day the temperature rises. The lochia may stop suddenly. Putrid odour to the lochia may develop on the third or fourth day, and if it does this will prove the presence of sapraemia, but not the absence of septicaemia. Putrid odour to the lochia, subinvolution of the uterus, and a moderate grade of fever, say to 101 degrees or 102 degrees by the third or fourth day generally mean sapraemia alone, or at worst a mild septic infection as well. Very high temperature, 104 degrees to 106 degrees, often beginning on the second day and accompanied by chills and general appearance of severe illness usually mean septicaemia.

If the site of infection be a perineal or vaginal wound, and this is by no means uncommon, involution of the uterus may not be greatly interfered with. Let me quote the words of Smyly: "If a patient with a high temperature looks well, sleeps well, and says she is well, she is, at any rate, not septic." "If a patient with a high temperature looks very ill, sleeps very badly, and says she feels very ill, she generally is very ill." "If a patient with a high temperature looks very ill, sleeps very badly, but says she is very well, she will probably die." This last is the condition known as euphoria.*

Treatment in the Early Stages.—As soon as the premonitory symptoms which I have described appear, the patient should be raised to a semi-recumbent posture to favor drainage; then give calomel grs. ii in divided doses, followed in 6 or 8 hours by magnesium sulphate $\frac{3}{4}$ ss of the saturated solution every hour till the bowels are freely moved. Examine the vulva, vagina and cervix carefully. If any wounds are found showing a gray sloughing surface, touch them with pure carbolic acid and dust them with iodoform. Any stitches that have been put in must be removed. This treatment may be repeated every day until the sloughs clear up. If the vulva or vagina alone, and not the cervix are thus infected, do not touch the interior of the uterus. If by the third or fourth day the temperature is up, the uterus larger than it should be at that date, and especially if there be a putrid odour to the lochia, the following treatment should be adopted: Let the patient be anaesthetized and placed in the lithotomy position. Wash the vulva and vagina thoroughly with green soap and hot 1 per cent. lysol solution, using a gauze pad as a wash cloth. Then douche thoroughly with 1 per cent. lysol solution. Then pass the hand into the vagina and the fingers into the uterus and explore the whole cavity, removing all clots, shreds of membrane and bits of placenta, whether loose or adherent. Douche out the uterus thoroughly with 1 per cent. lysol, and pack it with iodoform gauze 5 per cent. To do this well you must grasp both anterior and posterior lips of the cervix with tenaculum forceps and draw it well down, both for douche and packing. The Bozeman's intra-uterine douche nozzle, large size, may be used as a packer as well as for the douche. The gauze should be renewed in 24 hours, and this is all the intra-uterine treatment that should be given.

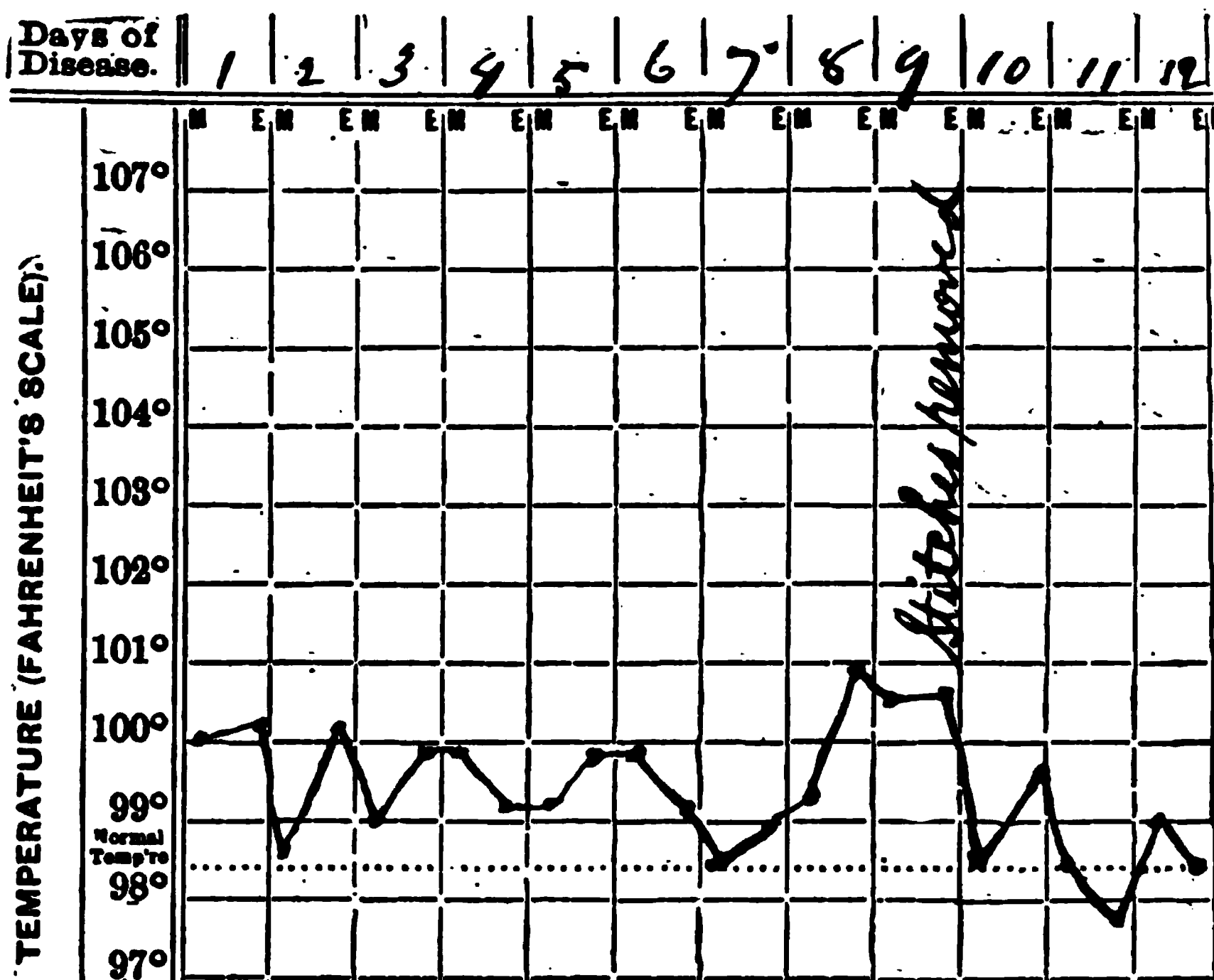
This treatment will cure sapraemia, and I think also some cases of mild sepsis. If this treatment is postponed till the 7th day or later, it is not so effective. At such a period it should not be undertaken unless sapraemia is clearly present. Remember that by late interference severe septicaemia may be started by septic organisms which have had their virulence increased by the preceding sapraemia, and which gain entrance through small lesions produced by the treatment.

*Jellett's midwifery, second edition, p. 136.

Course of Symptoms following the Treatment.—Exploration of the uterus under these circumstances is almost always followed within 24 hours, usually within 12 hours, by a high elevation of temperature and a rigor. The temperature soon falls again, and if the case be one of sapraemia alone it usually remains normal by the third day after exploration. If, however, the case be one of septicaemia the septic temperature and other symptoms continue.

Treatment of Septicaemia. If streptococci are found in the lochia from the uterus, antistreptococcic serum should be given—20 c.c. by injection every 8 hours while it seems to be doing good. Evidence of this is found in the general sense of well-being it induces in the patient soon after administration, as well as in the fall of the temperature. If after 60 or 80 c.c. have been given no good results it may be discontinued. Direct now every effort towards maintaining the patient's strength, and meeting complications as they arise. Three things should be given: *whisky*, from 6 to 20 ozs. per diem; *quinine*, 1 grain t.i.d. if the stomach stands it well; and *strychnia* hypodermically from 1-60 gr. every 6 hrs. to 1-20 every 4 hrs. All sorts of prepared foods may be needed to maintain nutrition. Amongst these I would especially mention somatose and Brand's meat extracts. As a hypnotic $\frac{3}{4}$ ii of whiskey given in the form of a hot toddy is often effective. It is oftentimes difficult to say whether a pelvic abscess is present or not, and a leucocyte count may aid in the diagnosis—very pronounced leucocytosis being in favor of abscess formation. If an operation for the opening of such an abscess be necessary, be careful not to tie the patient in the lithotomy position, but let the legs be held. The pressure of straps or sheet on legs and shoulders may so diminish local vitality as to start thrombosis or abscess formation at these points. I am convinced that *open air* treatment is almost as much indicated in septicaemia as in tuberculosis. Let the patient be well wrapped and carried *carefully* into the open air on a couch. This treatment has produced excellent results in the two or three cases in which I have tried it. High temperature does not contra-indicate. Lastly, *never give up while life lasts*. I have seen most marvellous recoveries after three months' of illness, and after hope had been abandoned several times.

Gonorrhoea.—Fortunately the acute stage is usually past before labor takes place. When gonorrhoea infection is known to be present, avoid all manipulation during labor and after it. I sub tend the chart of a patient who was admitted to the T. G. H. for repair of the perineum, labor having come on suddenly and the child being born without the attendance of a physician. The infant developed severe ophthalmia, and gonococci were found in the lochia taken from the cervix. The patient was left absolutely without local treatment and did well.



I have reserved the question of preventative measures till the last, because it seems to me too much of a subject in itself to be interpolated in the midst of an account of the fevers arising in the puerperium.

British obstetricians have for years been greatly exercised over the fact that though puerperal sepsis in hospitals has been reduced almost to the vanishing point, it is almost as great a scourge as ever in general practice. It was hoped that better results would follow the better training and supervision of midwives. As a three months' course is all that is required, however, things remain as bad as ever—a result which will not greatly surprise Canadian obstetricians. Lately the president of the London Obstetrical Society has endeavored to lay the blame on the defective teaching of the medical student in obstetrics, a statement which has led to much interesting correspondence in the *Br. Med. Journ.*—and the death rate still goes on. Things are not so bad here as they are in the old land, but yet we should have less sepsis.

Prophyllaxis.—Prepare your patient during the 9 months of pregnancy for the ordeal of labor. She should take plenty of food, but no very heavy meal at one time. Exercise in the open air, not carried to the point of fatigue, and strict personal cleanliness should be advised. She must above all things avoid constipation. The toxæmia of pregnancy and all hæmorrhages render the maternal organism more vulnerable.

Where gonorrhoeal infection is found during pregnancy the patient

should be treated as follows: Three times a week a Ferguson's speculum should be introduced so as to expose the cervix. Into the tube is then poured a solution of silver nitrate of a strength of 40 grains to the ounce, sufficient of the solution being poured in to bring it in contact with the whole of the mucous membrane exposed at the end of the tube. The tube is then slowly withdrawn, the solution thus coming into contact with the whole vaginal surface. Even this treatment often fails to eradicate the infection.

At the outset of labor let the nurse give an enema in every case, no matter how recently the bowels have been moved, and let the patient empty her bladder. Then let the nurse give a warm bath, especially cleansing the external genitals. After the bath the patient should wear a napkin wrung out of bichlorid of mercury 1-3000, during the whole of labor. All the patient's clothing and bed clothes should be scrupulously clean.

The physician, and nurse too if she is to actively assist at delivery, should prepare as follows:

(a) Scrub the hands in hot 1 per cent. lysol solution for 6 minutes. This is timed by the sand glass at the hospital, by the watch in private.

(b) Clean the nails with a sterile nail cleaner.

(c) Wash off the soap in hot water.

(d) Soak the hands in fresh 1 per cent lysol solution for 2 minutes.

(e) Do not touch any unsterile thing before making examinations.

(f) Wear sterile gown.

(g) Boiled rubber gloves are an improvement and may be used for all ordinary obstetric work. They cannot be used for vaginal stitching, however, without being perforated by the needles.

In the conduct of labor remember that long continued pressure of the head on the perineum is apt to cause sloughing, which an early use of the forceps will prevent; also that dry labors should not be allowed to go on as long as those in which the liquor amnii is present.

If a lubricant is needed 1 per cent. lysol in Tr. of green soap does very well.

(h) Though these measures will go far towards the prevention of sepsis, yet the physician should remember that at best they are not perfect, and that he should make as few vaginal examinations as possible, informing himself as to the nature and progress of the labor by abdominal examination. All instruments should be boiled in a soda and water solution, and brought to the bedside in the vessel in which they are boiled, without being touched by unsterilized hands. For repair of the pelvic floor 40 day chromic gut in hermetically sealed tubes is the best material. For repair of the perineum use silk-worm gut, freshly boiled for each occasion.

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LACTO-FARINACEOUS DIET IN THE INTESTINAL AUTO-INTOXICATIONS.

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INTESTINAL auto-intoxication since the labors of Bouchard have given it the right to be spoken of in pathology, has been made the subject of numerous studies which enable us to fully understand its mechanism and to correct it by a rational and efficacious treatment. The works of Combe, of Lausanne, have contributed in a large measure to make secure this result from treatment. We have had the occasion in a recent case to prove the efficacy of the method of treatment which he advocates ; but before relating our observation we think we ought to explain according to this author the mechanism of intestinal auto-intoxication and to show how a lacto-farinaceous diet appears to be the remedy of choice with which to combat this pathological state.

Intestinal auto-intoxication is a direct consequence of the action of microbes in the digestive process. The role of the microbes is of the utmost importance and we can say that, in the normal state, the digestion by these is superadded to that by the enzymes. The enzymes transform the starches into sugar, emulsify the fats, from the albumins they make albumoses, peptones and crystallizable bodies. The action of the microbes in the intestinal canal is, therefore, extremely useful because it comes to aid digestion by means of the enzymes. Pasteur had supposed that this microbic intervention was indispensable and that life could not be maintained without it. Ingenious experiments show that, if in the course of digestion we suppress all microbic action, the young animals succumb or develop much less actively than is usual. We may, therefore, conclude that the microbes have an incontestably useful role to perform. Their action, however, is not without danger because by their presence the digestive tube, in the words of Marfan, is transformed "into a receptacle for and a constant producer of poisons."

Combe studied with care the noxious substances which result from the action of the microbes on nitrogenous foods. It is, indeed, the putrefaction of the nitrogenous food materials that constitute the great factor in auto-intoxication.

Microbic digestion gives rise to the same bodies as digestion by the enzymes, the pepsine and trypsine of the stomach and intestines. There are crystallizable bodies the albumoses, peptones, ammonia : crystallizable bases, such as lysine, arginine, etc. ; crystallizable acid bodies, as leucine, glycol, tyrosine, etc. All these can be utilized in the organism and be

converted into urea, carbonic acid, and water. But the microbic digestion does not stop at the breaking up of the albuminous molecule, it gives origin to two groups of substances, the one of the fatty series, as ammonia salts, butyric and caproic acids, and ptomaines; the other of the aromatic series as aromatic oxyacids, phenols, indols. These different bodies can no longer be used by the organism, they do not become oxidized in it, and they belong to the noxious products from which the system ought to rid itself. They are the products which if reabsorbed give rise to auto-intoxication. They would cause this in the normal state if the organism did not put in line the entire means of defence to change, to destroy, and to eliminate them. The intestinal epithelium, the liver, in the first place; the vascular glands, as the thyroid body, the thymus gland, the suprarenal capsules, in the second place; and, finally, the emunctories, and particularly the kidneys, eliminate those which have been neither transformed nor destroyed.

The conditions in which intestinal auto-intoxication is produced show themselves by two sets of facts. Either the poisons have been produced in normal quantity, but, in consequence of an insufficiency in the anti-toxic organs or of the emunctories, they have not been rendered harmless; or, and this is the case much the most frequently, the poisons have been elaborated in too great quantity and the means of defense of the organism have not been sufficient for their destruction.

The pathological states which cause an augmentation in the production of intestinal poisons are very numerous. Among these may be mentioned dyspepsia in all its forms, stasis in the digestive tube, acute and chronic catarrh, and muco-membranous entero-colitis.

How can we recognize intestinal auto-intoxication? Without doubt, in the majority of instances, by special disorders, such as vomiting, colic diarrhoea; but it is necessary to remember that auto-intoxication may show itself by symptoms affecting distant organs such as the nervous system, nutrition in general, the skin. It is very important then when the intestinal symptoms are latent to search out carefully the true causes for the derangements in the other systems, so as not to overlook their intestinal origin.

According to Combe chemical analysis can establish the diagnosis of intestinal auto-intoxication by the quantity in the urine of the elements arising from the intestinal putrefaction, which are eliminated by that channel. The ideal plan would be to dose the veritable noxious substance, ptomaine or toxine; but no chemical procedure permits this. It is necessary, therefore, to fall back upon the bodies of the aromatic series, which are eliminated almost exclusively by the urine, and which, if

they are not the true toxic elements, can at least serve to measure the intensity of the intestinal putrefaction, as their development is parallel to it. Combe points out the processes which enable us to attain this result. By adding milligrams of the aromatic substances in proportion to the grains of urea or total nitrogen we can obtain the coefficient of the auto-intoxication which measures it.

If the intestinal auto-intoxication is connected in a definite way with the putrefaction of nitrogenous substances under the influence of microbes, all the therapeutic efforts ought to tend towards the restriction incumbent to saturate it with some substance that is inoffensive to man of the number of these and to diminish in that way, the intensity of the putrefaction.

Intestinal antiseptics are wholly insufficient to disinfect the digestive canal, as all authors are quite in accord on this point. The administration of even massive doses of such drugs scarcely affects the number of the microbes. Repeated doses of purgatives and enteroclysis restrain in a marked manner the growth of the germs, but these are only adjuvant means and cannot be continued indefinitely.

In order to disinfect the intestinal canal, according to Combe, it is incumbent to saturate it with some substance that is inoffensive to man and destructive to the microbes, or at least paralyze them and prevents them from causing putrefaction of albumen. This method does not seek to destroy these organisms, but, by modifying the medium in which they live, are nourished secrete their toxins and reproduce themselves, seeks to diminish their vitality, activity, and virulence, by cutting off their food. To fulfill these conditions, we must limit as much as possible the nitrogenized elements from which the intestinal microbes secure their nourishment and introduce into the food a large quantity of carbohydrates, a medium in which they do not find the material requisite for their subsistence. A locto-farinaceous diet, complying with these conditions as it does, is the true antiputrefactive alimentation. The antiputrefactive action of milk has been known for a long time, and some recent precise experiences have confirmed this. The same individual placed on a meat diet yields three times as much of the aromatic excreta as when on a milk diet. It has been shown that of all diets milk best resists putrefaction. This quality is due specially to the carbohydrate which is found in it, the lactose, for, if we remove from milk its sugar, the caseine putrefies with as much rapidity as the albuminoid substances.

It is by its products of fermentation, lactic and succinic acids, that lactose paralyzes in some way proteolytic bacilli. The same restraining action due to these acids produced by lactose is found in a diet of kephir and fresh cheese.

The antiputrefactive action of carbohydrates manifests itself in digestion in vitro and in vivo. In vitro the addition of sugar, glycerine, or dextrine causes the complete disappearance of the aromatic substances arising in the artificial digestion of nitrogen elements. But it is the farina of cereals which, mixed with nitrogen products and placed in the *ven*, check all formation aromatic substances.

In vivo, by adding carbobydates to the nitrogen foods, we equally check to a considerable extent the formation of aromatic substances. Farinaceous diets, farinas of cereals and their derivatives, prevails over other carbohydrates, as they furnish only little by little lactic and succinic acids.

Lactated and farinaceous foods have, therefore, both a true antiputrefactive action, but the advantage rests with the latter. Milk foods, in a word, contain an antiputrefactive substance of undeniable activity, the lactose; but it is rapidly absorbed in its passage along the intestinal canal, and the caseine still indigested and deprived of its antiputrefactive substance continues to undergo decomposition for the same reason as other proteids do. On the other hand, it is a fact of current experience that in certain cases of acute and chronic enteritis,, and particularly in muco-membranous entero-colitis, milk is very badly borne by the patients. It is not so with regard to farinaceous diet. These constitute themselves the antiputrefactive substance or rather contain the germ of it, and it is only little by little that the lactic and succinic acids are produced as food passes along the intestinal tract. As a result of this the quantity of the restraining substance, far from exhausting itself as the lactose of milk does, reproduces itself in proportion as the bacterial life becomes more active. In the second place, a farinaceous constitutes a bad medium for the nourishment of the proteolytic bacteria. In fine, they are admirably borne in all the affections of the large intestine, the place where the preponderating amount of putrefaction in proteids occurs.

It is well to associate with milk a farinaceous diet which corrects in some way its inconveniences and makes it much better borne and digested. Combe has shown that to saturate the entire intestinal tract with the restraining substances, we must give with each meal where albumen is ingested about five times its volume of farinaceous articles. The result would be better if the number of meals were increased.

If the lacto-farinaceous regime constitute in some way the ideal diet to combat intestinal putrefaction, we can lessen its inconvenience by giving in the less severe cases proteid food in the form of meat, but it is always ingested with five times its weight of farinaceous diet. .

We have had the opportunity of establishing for ourselves the good effects of the regime advocated by Combe among patients suffering from undoubted intestinal auto-intoxication.

A full description of the extremely severe symptoms of a case of intestinal auto-intoxication is given. The case improved steadily under the following treatment.

The stomach was washed out with a large quantity of water containing naphtholin, 1 in 1,000; he was given a calomel purge, and a cachet of grains 6 of cryogeninc. A diet of milk and eggs was ordered. Under the influence of this treatment the temperature became normal from the second day. A manifest amelioration was noticed in the digestive functions.

The alimentation was then increased. To the milk and eggs were added in progressive doses 200 grammes of raw meat. The patient took in addition a little roasted chicken and some leguminous soup. The general condition soon improved, and the patient who had been confined to his bed was able to get up, move around in the house and take some short walks outdoors. The condition of the digestive functions was not yet very satisfactory, as the patient often had colic some hours after food. The stomach was frequently tympanitic and at the level of the caecum and the descending colon, pain and gurgling could be elicited. The patient had several relapses of diarrhoea. Constipation was the rule and the large lavages brought away mucus in considerable quantity. The temperature was sometimes subnormal. We prescribed the locto-farinaceous diet without altogether suppressing meats. At seven in the morning he took some phosphates in milk; at eleven some soup, the yellow of two eggs, chicken, bean puree and dried cake; at six the same diet, but soup made with water was replaced by one made with milk. The quantity of milk allowed per day was about one quart. The patient was instructed to drink only between meals. Combe affirms that the separation of solids and liquids in this way diminishes notably intestinal fermentation.

Under the influence of this regime the condition of the functions were greatly improved, the malaise after meals disappearing. The stools no longer contained mucus and undigested fragments. The gurgling was no longer detected in the large intestine, nor were there attacks of fever or diarrhoea. He has followed this line of diet for seven months and declares that he never was better so far as his digestion is concerned. Daily douches, subcutaneous injections of arseniate of strychnine, and electrization of the intestines are also useful. The latter has a happy effect in regulating the bowels. This method of treatment is not only useful in cases of intestinal auto-intoxication but in case of muco-membranous entero-colitis.

THE PREVENTION OF APOPLEXY.*

BY T. CLIFFORD ALLBUTT, M.D., F.R.S.

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FROM the time of Hippocrates physicians have aimed, by methods better and worst, at the forecast of disease. They have perceived that successful forecast is not only of prime utility in the particular case, but is the test by which they must be judged concerning their knowledge of the causes of disease, a knowledge in which must lie, in the long-run, our command of the means of cure. And if, leaving the particular instance, we turn our eyes towards the broader incidence of disease, we shall see that a knowledge of causes is the only way to what is far more than individual cure, namely prevention. On such considerations as these we may be contented to be judged to-day. To the great Italians of the early renaissance we owe far more than we are wont to acknowledge. To them we owe not indeed Harvey himself, but surely the spirit and the teaching which made Harvey what he was; and as in Harvey physiology began, so pathology had its chief source and inspiration in Morgagni.

Virchow has said that the key to Morgagni's reform was the substitution of the question, Where is disease? for What is disease?—the substitution of an inquiry into the place and order of the phenomena, instead of that which had ruled the Middle Ages, the inquiry into the essence of disease. Since Morgagni's day the revelations which have rewarded this change of attitude and method have been prodigious, and not in the direct results of anatomical search only. By the new method wide and deep changes have penetrated thence into the fields of clinical and therapeutical knowledge. In therapeutics, for instance, the distance between Morgagni and Wilks was as great as in morbid anatomy itself. The reform was sound, useful and progressive, almost above our appreciation. Yet, like all reforms, it has had its defect or partiality. To ask, as Virchow put it, Where is disease?—unless we give an infinite extension to the word "where"—is to convey too stationary a sense to the problem; to make it too static. Among the consequences of this limitation was a certain fatalism, both of pathology and of therapeutics; and this the more that; as in the vast majority of cases the necropsy does not take place until the disease has wrecked the organs affected, the mind is impressed by the destructive and inevitable aspect of the event, rather than by the processes, often very protracted and insidious, in which the event was generated. It is recognized on all hands that from this static attitude of observation prognosis and therapeutics suffered much loss;

*Read at the Bristol-Medico-Chirurgical Society, and from the *Bristol-Medico-Chirurgical Journal*.

and during the last decennium the acuter observers of clinical phenomena have been engaged in encouraging a less fatalistic prognosis in diseases of the heart and kidneys, in tuberculosis, and in many other maladies. In diseases of the nervous system, as we should expect in the sphere of greatest complexity, one in which the causes are more profoundly withdrawn from direct observation, this fatalism still oppresses the physician. Where these diseases are seated is but too apparent; but by what processes they accumulate is as yet concealed from us. Now the ravages of disease are grievous enough without the despondencies of the *post-mortem* room. We shall gain heart, and the patient will gain hope, if we turn our eyes for a little while from this theatre to the clinical laboratory, in search of the genesis of disease; in an endeavor to detect the first small beginnings, which, unchecked, issue in such miscarriage. We shall not indeed go back to inquire, What is disease? but we shall not stop at the morbid anatomist's question, "Where is disease?"; we shall ask farther, How is disease?

Clinically, we have given up the catastrophic notion of disease; we have learned that its catastrophes are sudden only to him who is blind to their approaches. The springing of a mine is astonishing to its victims, but is no surprise to the sapper who laid it, who carried the clues to his tent, and at the just moment touched the button. The very name of apoplexy—in Latin, *sideratio*—signifies a stroke as if from the stars; the victim is, as it were, planet-stricken. And so it appeared to our fathers who gave it the name, and to many a generation after them; nay, so it appears still to the inexpert public. Yet nowadays the pathologist himself—possessed at first with fatalist submission, silent before the violent outburst of blood into the delicate web of the brain, pondering in helpless dismay what man could have done in face of such a stroke—has begun to try to get behind the catastrophe. Now he demonstrating to the bystander that granular kidneys, perhaps,—at any rate damaged arteries, and an abnormal heart, are precedent conditions. So that the event is surprising only to the unwarned. At this stage the eager mind questions farther and farther—how comes it that these arteries, these kidneys, this heart, are so changed? For all this is no swift infliction; it signifies modifications implying a long duration and gradual progress, modifications which again cannot have been without their insidious causes to take us farther back still; and so on. Thus, as in tuberculosis, we are laying aside the attitude of amazement or resignation, and are putting on that of the scout; if perchance we may detect the first approaches of the enemy, or even by timely diplomacy prevent him before war is declared. We are receding from the fatalism of the early pathological anatomists, and returning to that desire for more and more timely forecast which dis-

tinguished the schools of Cos and Cnidus; the forecast in which lie the proof of scientific knowledge and the means of prevention.

At the present time we are enthusiastic in the foreknowledge and prevention of tuberculosis; we are waylaying the epidemics in their courses; we are ardently pursuing the tracks of cancer; and as one by one we disarm them, we are gathering understanding and hope. It is my desire to-day to bring you to a like encouragement in respect of the apoplexy of cerebral hemorrhage.

That cases of "stroke" are not all the same kind, we have known for some time past; especially since the researches of Kirkes. On the cases in which healthy arteries are blocked by casual embolism, however, I have not now to speak; moreover, we will set aside all cases in which the effects of extrinsic poisonous or bacterio-toxic agents are concerned. We are to consider those in which disease of long-standing is found in the arteries about the seat of the hemorrhage. In a large number of these cases, however, we find no effusion of blood, or none in bulk, at any rate; the circulation of the brain is arrested, but by a silting up of the arteries rather than by rupture of them. Moreover, in these cases we find that the heart, abnormal as it may be, does not indicate present or previous hypertrophy; often indeed an atrophy. We find too that the arteries of these cases often present calcification of the middle coat, while the body at large is one in which senile change is far advanced, and probably not advanced prematurely—the patients do not run between sixty-five and seventy, but between seventy-five and eighty-five. In apoplexy by cerebral hemorrhage, the outbreak in the brain is no fault of this organ but wholly its misfortune. By apoplexy we lose day by day able citizens whose mental powers before the fatal seizure were intact both in vigour and quality. The pathological signs are those of some slow injury to the blood-vessels; but the heart is or has been hypertrophied and the result of the conditions is rupture rather than occlusion.

Now what do we know, or what can we find out, concerning these awful visitations? For the last quarter of a century I have taught that in a large number of cases of sanguineous apoplexy the kidneys are not granular; and if in some of them they are fibrous, they do not partake of the nature of chronic Bright's disease. This I affirm on the condition of the secreting structures of the tubes, which dwindling or crushed as they may be here or there, present no foci, or traces of past foci, of degeneration or necrosis. Professor Osler has given his valuable judgment in favour of the proposition that a large number of cases of the kind we are contemplating are not attributable to chronic Bright's disease. Now my belief is that, if we can carry our analysis of causes far enough back, we shall reach a junction where we shall travel on a line of common

approach to apoplexy with Bright's disease and to apoplexy without it; but for present convenience, and under the restriction of time, I must rule out the Brightian class. It is by the study in the first instance of the simpler case that we shall get back to the junction.

Now in a case of apoplexy what do we find in the damaged parts? Brain assumably healthy; heart hypertrophied; arteries spoiled: the phenomena lie then in the mechanism of the circulation. Thus, in accordance with our desire we step back from the static point of view and enter upon the dynamic. We shall try to discover which of the variables in this function are altered? In a simple case the heart presents no primary changes, but changes altogether secondary; essentially it is not only healthy in tissue but has worked for a long time at high pressure, thus doing not less but more than its contract. Such changes as may be seen in it are compensatory, or, if morbid, evidently consequential. Then what about the arteries? These have undergone a change, call it atheroma, sclerosis—what you will, so long as we are agreed on signification—but, diseased, as they are, they have not silted up, as in the cases we contemplated but to put aside, but have burst. Why have they burst? Because they have been submitted not only to the mean pressures of age but also to the augmenting mean pressures of a reluctant peripheral circulation. They have burst at last for the same reason that they have sustained gradual injury; namely by the accumulation of obscure stresses which, if we might observe and measure them, we might avert and interpret. I put aversion before interpretation because happily in many conditions of life we can take up our guard before we know why we are the object of hostility, or even before we recognize our enemy. We do not know why in cases such as these the circulation is embarrassed: the cause of the reluctance in the periphery lies still beyond our ken. But, briefly, I may say that the cause must consist either in a narrowing of the calibres of the arteries or stream bed over a very extensive area, if not indeed universally, or in an increase of viscosity with excessive friction in the blood itself. I have been asked somewhat tartly how I demonstrate excess of viscosity, and in what it consists? My answer is, that I never said that the blood in these cases is more viscous, but that there exist the two alternatives only which I have cited—narrowing of the channels and increased friction within the fluid itself. To decide which is the cause, or, if both, the degree of each in the combination, I never pretended. But I admit that it is not easy for me to conceive a contraction of arteries in all or virtually all areas without compensatory dilatation in some of them. It has been suggested to me that in elderly persons the depressor property of the heart and vaso-dilatation may be stiffened or abolished. But a simple test will indicate that our vaso-dilator mechanism is not much abated. Let an elderly man enter a hot bath. For a

short time at first he will find the radial artery contracting; let him continue however to observe, and in two or three minutes he will find the artery beginning to dilate, until it is largely distended; and a corresponding afflux of blood takes place to the surface. This is not dilatation of the splanchnic area, it is true; but if vaso-dilator mechanism does not rust up in one area, it probably does not in other areas.

It is alleged that in the elderly the arteries become refractory because of sclerosis, whereby their walls grow sluggish or stiff. This explanation, by the way, is inconsistent with that which attributes excessive arterial pressures to arterial contraction over large areas. And in any case to attribute high pressure to sclerosis, and to overlook the large class of cases in which arterial degeneration is manifested without rise of pressure is bewildering. Again, by some writers increase of arterial pressure is explained as a "hypertonus" of the arteries, a resuscitation surely of that older pathology which used to attribute disease to "hypertrophy of the heart"? It is conceivable, of course, that a morbid state of the vaso-motor centre, due to some persistent irritation in the spot, might keep up general and persistent vaso-motor contraction. Still this is not very probable, nor do I know that this is the view of those who discuss "hypertonus." Must we not assume for the present that hypertrophy in the arteries is produced by the same mechanism as in the heart, namely by persistently excessive pressures on their internal surfaces? In my opinion the vice lies not in a morbid tone of the vessels, but in excessive internal pressures such as obstruction at the periphery would set up. If, then, arterial spasm be also a factor in the hyperpiesis, it seems more consistent to attribute this to the same cause as that, whatever it may prove to be, which chokes the periphery. My observations are that in some cases of rising pressures without Bright's disease arterial spasm, whether primary or consequential is manifestly present; but in others, perhaps the majority, it is not obvious. In some we have what I have called the "large, lax and leathery" artery; in others we find the "wiry" artery. The first kind may be regarded as "arterial tension," for in these cases the effects of tension are very manifest in the consequent tortuosity of the vessels; in the walls of wiry vessels this stretching effect, and indeed the sclerosis itself, is less apparent. Yet in my experience the wiry hyperpiesis is far more difficult to reduce.

However, to come to the matter of prevention; if, concerning the mechanism of persistent rise of mean arterial pressure, we are in the dark, happily there is less doubt as to the treatment of the condition. If the patient is to be saved from an apoplexy, it is only by long anticipation that the proclivity can be counteracted. It seems probable that a disposition to hyperpiesis runs in families; if so, in such families vigilance is imperative. But the tendency is too common to be regarded as one confined

by any such hereditary limits. Even in children and youths it is by no means rare, though I have little information on the deferred consequences of hyperpiesis in such patients. Such information must be obtained from the family physician, who watches children from infancy to youth, from youth to maturity: This I can say, that in young people it may thicken the arteries plainly enough; but the thickening is probably of the muscular coat only, not of the intima, for it will disappear, as a hypertrophy of the heart disappears in persons who put aside causes of exceptional stress on this organ. The care of these juvenile cases, then, does not fall so near the group of potential apoplectics as to require our attention to-day. Still, I think a study of these precocious cases may throw light not only on an undescribed disorder of children, but also upon the causes of hyperpiesis in the elderly.

The aim of this discourse is to prevent apoplexy, which is a message to elderly persons. I have held against all comers for many years that arterio-sclerosis, as distinguished from the sclerosis decay of senile involution, is not the cause but the consequence of rising arterial pressures. In my view, then, prevention must lie first in the detection of a special tendency to a persistent mean rise. I need not say that occasional rises, even of morbid origin, are apt to occur in all persons, and to disappear before the vessels are permanently damaged. In others, however, the rise is persistent, often to very high degrees; yet if this tendency be detected in its earlier phases it can—in many instances, at any rate—be reduced and kept down; but the longer the story, the older the rearrangement of parts, the harder reduction becomes. I urge, then, that as a matter of routine every adult of the age of forty and upwards should have his blood pressures measured by the best instruments available, instruments which I have not now time to discuss. And I urge that this appreciation should be repeated every five years, say till the age of sixty, when, if there be no great increase—I say no great increase, for in almost all elderly persons there is some rise of mean pressure—the danger of apoplexy may be disregarded.

Of the principles of treatment of hyperpiesis we cannot be completely assured till the obscure points I have mentioned are cleared up. That there is any difference in treatment between the leathery and the wiry artery people I cannot say. So far I have not been able to discover more than that, as I have hinted, in the latter the perversion is far less submissive to deobstruent treatment, as generally understood, than in the former. Nor can I find any therapeutical divergence of practical value between burly, red-faced people and the spare and pallid. I am disposed to think, however, that pallor and wiry vessels are more frequent among the sedentary, and that the burly, red-faced people are of those who may over-eat and over-drink themselves, but take, on the other hand, much

exercise in the fresh air. In the former there is a long history of relative excess in feeding; in the latter of positive excess. It cannot be too earnestly declared that nearly all men, and not a few women, take far more food than they need; and that the sedentary persons, such as scholars, lawyers, or merchants, although prompted by some nervous exhaustion they live more generously than cowboys, need very much less food than they habitually consume. If, then, in any person we find persistent rise of mean pressures, we shall revise his mode of life; advising regulated exercise, abstinence from alcohol—which if not an initiator, is a potent ally of other influences—and a great reduction in intake of food. In these cases also, the regimen and the waters of certain spas—such as Harrogate, Carlsbad, or Marienbad—are invaluable.

The readiness of response in individuals is very various. In some, as I have said, reduction is attended with much difficulty; in others a couple of seasons at a bath, with punctilious restriction of diet and regular exercise, suffice to put the danger aside, at any rate for a time. In others, do what we may with regimen and medicines such as mercury and salines incessantly brought to bear, the rise, even if set back, comes up again and again. To such persons the ultimate result of apoplexy is pretty certain. It seems probable that the systematic blood-lettings of our forefathers, who were big feeders, was a rough-and-ready method of preventing morbid augmentations of blood pressures; and I am disposed to think that, practised with more discrimination, we might find in it a valuable remedy in the habit of body I have alluded to. I must honestly confess, however, that I have not had the moral courage to recommend it. Vaso-dilators are, as we should expect, disappointing. The high pressure is conservative, so that to reduce the pressure without removing or relieving the causes which import it is to set natural readjustments at naught. So long as the high pressures can persist the blood is driven through the periphery, and the patient may feel well enough; it is when the cardiac energy begins to slacken, and vaso-dilators are apt to slacken the heart also, that he suffers from the sense of exhaustion, the vertigo and the morning melancholy which vaso-dilators bring on factitiously. Notwithstanding, vaso-dilators may on occasion aid us at critical moments.

I need not say that if a slight apoplexy occur, these measures must be undertaken with the more determination. Too often, unfortunately, we are not consulted until the enemy is upon us; still, even then, on the lines I have indicated, a return of the attack may be postponed with no little success.

In conclusion, let me urge upon you in all cases in which you are consulted by middle-aged persons, to note the blood pressures, and if possible to record them by means of one of the instruments which give us at any rate approximate estimates in this research. Not rarely, in con-

sultation with physicians whose ability is above my praise, I note high blood pressures which they had not heeded, although they may freely admit the truth of the observation when their attention is drawn to it. Even the most capable of us are apt to see what we expect to see, and that only. Moreover the most erudite finger cannot always be trusted. It is my purpose, therefore, to invite you to take heed to the state of pressure in all middle-aged patients, and, if occasion occur, in persons who, not admitting any ill-health,, may nevertheless be breeding an apoplexy un-awares; a few years more neglect, and the event, unless anticipated by a fatal pneumonia, may be inevitable.

SIR FREDERICK TREVES ON ALCOHOL.

Sir Frederick Treves, Surgeon to the King, addressing a temperance meeting, declared that alcohol was distinctly a poison, and that its use ought to be limited as strictly as any other poison. He added that it is not an appetizer, and that even a small quantity hinders digestion. Its stimulating effect only endures for a moment, and when this is passed, capacity for work falls enormously. Its use is inconsistent with work requiring quick, keen, and alert judgment. Reviewing medical practice for a quarter of a century, Treves declared that he could say that the use of alcohol in hospitals and by physicians generally had emphatically diminished and is diminishing.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

A DIET IN CHRONIC CONSTIPATION.

Moyer, in the *St. Louis Medical Review*, suggests the following :

7 a.m. A glass of cold water.

8 a.m. A liberal breakfast with sweetened coffee, a good deal of butter, honey, and graham bread. After which the patient should go to stool.

1 p.m. Midday meal of meat, a good deal of vegetables, salad, stewed fruits, farinaceous food, followed by half a bottle of light wine.

7 p.m. Meat, with plenty of butter, graham bread, and stewed fruits.

10 p.m. Before retiring fresh or stewed fruit.

This is a diet for simple constipation and is not adapted to obesity or diabetes. The diet in all cases must be suitable to individual cases rather than according to dietetic rules.

THE TREATMENT OF EPIDEMIC CEREBRO-SPINAL MENINGITIS BY DIPHTHERIA ANTITOXIN.

In the *Medical Record*, March 11th, Waitzfelder, of Gouverneur Hospital, New York, discusses the results of this method of treating this terrible disease. At this hospital there were admitted during 1904, 113 cases of which 75 died, 5 unimproved, 5 improved, and 28 cured. The treatment did not originate with the writer, but his attention was called to the work of Wolff, bacteriologist of the city of Hartford, who demonstrated an antagonism existing between the Klebs-Loeffler bacillus and the diplococcus intracellularis meningitidis, the causal agent in the recent epidemic disease, pure cultures of the latter being killed by the serum. He communicated with Wolff, who reported a case which showed marked improvement after the injection of the anti-diphtheritic serum, and he determined to try it in the hospital. In all, 17 cases were so treated, 5 recovered completely, 3 died, 9 are still under observation; of these, 5 give

every promise of a speedy recovery, no prognosis can be given in the other four. The dose given was 6,000 units to children under 5 years of age, 8,000 units to those between 5 and 12, and 10,000 to adults. Thus the dosage is larger than is customary in diphtheria, and should be repeated daily during the course of the disease.

TUMOR OF THE PARATHYROID GLAND.

In the *Bulletin of the Johns Hopkins Hospital*, March, MacCallum reports a case of tumor of the parathyroid gland, a condition which has been described only twice before. It was discovered in the course of an autopsy upon a man aet. 26, who had suffered for some time from chronic nephritis and had died from uraemia. The mass lay on the right side, just below the lower pole of the thyroid, and quite separate from it, in a delicate capsule; it was almost spherical and was about 2 c.m. in diameter; and in the centre was a small cavity filled with a clear fluid. The blood supply was not rich.

Under the microscope it was seen to be made up of a tissue much resembling the normal parathyroid strands, and large anastomosing branched masses of cells were separated by a relatively delicate stroma, which bears the blood vessels. Certain masses of cells surround a central cavity, containing a finely granular coagulum. Of colloid matter there was practically no trace.

The normal parathyroids were found in the case. It could not, therefore, be regarded as a compensatory hypertrophy, unless, indeed, it had some relation to the renal insufficiency. For the present the writer would regard it as an adenoma.

PRACTICAL POINTS IN THE ADMINISTRATION OF POTASSIUM IODIDE.

In the *Medical Record*, April 1st, Huhner, of New York, calls attention to the following points which, while many of them are well known, are so important that repetition is permissible:

(1) Always give well diluted and never, if possible, on an empty stomach. For dilution nothing is better than milk, as it disguises the taste and prevents disagreeable after effects; the compound syrup sarsaparilla is also an excellent vehicle.

(2) It is important to have a perfectly pure preparation, many of the bad effects are due to impurities.

(3) Strict bodily cleanliness, while taking the drug, will go a great way in the prevention of skin-troubles; these are due to the decomposition of the excreted salt by the fatty acids and the irritation by the iodine formed.

(4) It is possible to make a 100 per cent. solution but it is very difficult; and, if it is prescribed, the druggist will probably give a weaker one.

(5) Iodide of potassium is incompatible with alkaloids and the ordinary soluble metallic salts. So, for example, a calomel dusting in the eye would cause irritation.

(6) Small doses may cause iodism while larger ones will not.

(7) Potassium iodide should never be given in phthisis or where it is suspected, as it is irritant to the bronchial mucous membrane. Where syphilis is associated it may have to be used.

ON THE INFLUENCE OF COPIOUS WATER DRINKING.

In the *University of Pennsylvania Medical Bulletin*, March, Hawk of the laboratory of that institution gives the result of a series of experiments made on men to determine the effect of copious water drinking on the body economy. Previous experiments had been made on animals and were directed, in the majority of cases, to the consideration of the excretion of nitrogen and, in many cases, by methods, in the opinion of the writer, were inaccurate. In the experiments reported the subjects were placed on a constant diet, and after a period long enough to arrive at an equilibrium, this diet was supplemented by the addition for two days of an enormous volume of water. Analysis of the excreta and food ingested were made, the number of subjects being five.

Copious water drinking was found to cause an increased excretion of nitrogen and phosphorous by the urine. The increase in the amount of nitrogen eliminated is due, primarily, to the washing out of the tissues of the urea previously formed, but which has not been removed in the normal processes, and secondarily, to a stimulation of proteid catabolism.

The increase in the excretion of phosphorous is due to increased cellular activity and the accompanying catabolism of nucleins, lecithins, and other phosphorous-containing bodies.

In man an increase of 4500 c.c. in the daily amount of water ingested caused an increase of 12.8 per cent. in the excretion of nitrogen by the urine on the first day, and the somewhat smaller increase of 6.8 per cent.

on the second. The course of the SO_2 excretion showed a general tendency to run parallel with that of nitrogen.

The course of the P_2O_5 , as influenced by copious water drinking, was distinctly different from that of the others, it increased above the normal on each day of the water period, the maximum excretion occurring on the second day of the increased water ingestion, and ranging 17 to 20 per cent.

There was a constant tendency for the largest percentage of the ingested fluid to be excreted by the urine on the days of copious water drinking. This was indicated by an elimination of 28.5 per cent. on an ingestion of 2,300 per cent c.c. as compared with an elimination of 90.6 per cent. on an ingestion of 6,400 c.c. of fluid.

These experiments have a practical bearing in the support they give to the suggestion of giving large quantities of water in febrile or toxic conditions to assist and increase elimination.

HOSPITALS AND MEDICAL EDUCATION.

In the *Medical Times and Hospital Gazette*, London, March 11th, there appears an article on this subject which, while referring directly to the institutions in the Old Land, will be of interest here, where the problem of support to our hospitals is becoming of so much importance.

It will be remembered that the Prince of Wales, as president of King Edward's Hospital Fund, appointed a committee, consisting of Sir Edward Fry, the Bishop of Stepney and Lord Welby, to inquire—

1. Whether any, and if any how much, money given or subscribed for the relief of the sick poor to the twelve London hospitals having medical schools, is contributed, directly or indirectly, by those hospitals, or any of them, for the maintenance of medical education.

2. Whether any direct or indirect return for such contributions (if any) is received by the hospitals from their medical schools, and, if so, whether such return is equivalent to the amount of the contributions.

3. Whether, in the event of the committee finding that any hospital contributed to its medical school a sum in excess of the return it receives from the medical school, there are any special considerations advanced in justification of such expenditure, or any general considerations which would apply to all hospitals having medical schools.

Specific instances have no interest here, but the general conclusions may be quoted as pertinent:

"We think that the publicity which attends the work of a hospital where there is a body of young men in attendance also tends to maintain at a high level the whole work of the institution.

"It has been urged before us that the great amount of work done without payment, or with inadequate payment, by students, in the character of medical clerks and dressers, and in connection with the out-patients and the casualty cases, constitutes a pecuniary advantage received by the hospital from the school; but the evidence satisfies us that the expenses incurred in hospitals with schools are generally in excess of those in hospitals without schools, and we are of opinion that no saving of expense can be attributed to the presence of medical students. On the contrary, some of the evidence before us, together with a study of the accounts of the various hospitals, has brought to our attention remarkable variations in the expenses incurred by the several hospitals, and raises the important question whether, in the case of some of the hospitals to which schools are attached, there is not considerable extravagance and waste in the expenditure.

"With regard to the welfare of the patients, this depends so largely on the character of the individual medical men and nurses concerned with each case that it is difficult to draw any line between the two classes of hospitals. Probably, in cases of great obscurity and difficulty, the presence of a large number of students may at times be useful; but on the other hand we think that the quiet of a hospital without students must often be a comfort to patients, and on the whole we do not think that the hospitals with schools can substantiate any superiority, in this respect, over other hospitals.

"The schools confer certain considerable benefits on the hospitals, and the hospitals confer on the students very great benefit, because without admission to such institutions the students could obtain little or no clinical teaching. These mutual benefits may, the committee think, be fairly set off the one against the other."

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division : Surgeon Toronto Western Hospital.

SURGICAL TREATMENT OF CIRRHOSIS OF THE LIVER.

At the French Congress of Surgery, held at Paris, October, 1904, A. Monprofit outlined the surgical methods of treating hepatic cirrhosis under the following heads :

1. Paracentesis.

2. Simple laparotomy.
3. Laparotomy followed by drainage.
4. Vaginal laparotomy.
5. Omentopexy—Talma's operation.
6. Portal-vena-cava anastomosis—Fistula of Eck.

Monprofit quoted Talma's statement, that omentopexy should be done in every case where there was obstruction to the flow of portal blood through the liver, but he did not entirely agree with this statement.

Ascites might be due to other causes than cirrhosis, therefore, exploratory laparotomies were often in order. One could not state positively that the ascitic stage of cirrhosis marked the end of all hope of relief from medical treatment; yet it held true that the beginning of ascites marked the time when surgical interference should be urged.

Statistics showed an operative cure of 35 per cent. and a mortality without operation (in atrophic cirrhosis) of 100 per cent. Even those cases which were not cured by operation were very often much improved.

Every case of biliary cirrhosis should first receive carefully directed medical treatment, and be subjected to surgical interference only after medical aid had failed.

M. Tuffier called attention to the fact that cytological examination of the ascitic fluid was most important and entirely too frequently neglected.

M. Lejars reported several of his cases, drawing attention to the importance of cholecystostomy as a measure that did much to ameliorate the severe symptoms of cirrhosis.

M. Delangeniere dealt with the etiology of cirrhosis, stating that in his opinion all varieties of cirrhosis were due to infections travelling up the ducts from the intestine. Based on this view was his idea to combine omentopexy with temporary cholecystostomy.

M. Bardesco, of Bucarest, stated that a definite cure certainly depended upon the degree of change in the liver at the time of surgical intervention and to the permanence of the changes induced by the operation on the collateral circulation. He felt that failures were often due to the fact that we delayed too long with operation, thereby allowing the liver cells to become too much compromised, and the portal circulation to become too much embarrassed. We should operate always before all the various medical means had been used, and should be careful to select a sufficiently large section of omentum, in which the vessels were not sclerosed, and to secure a broad surface of contact with the abdominal parietes, choosing, in particular, the abdominal muscles for points of contact.

THE SEMEIOLOGIC VALUE OF BLOOD EXAMINATIONS IN SURGERY.

The above subject was considered at the French Congress of Surgery, 1904.

Somenberg, of Berlin, confined his remarks to the blood in appendicitis cases and gave the following conclusions :

1. The more violent the injection, the greater the leucocytosis. A low leucocyte count in a foudroyant case, usually means a fatal termination.

2. If the count diminishes as the symptoms of the disease lessen, then the prognosis is favorable.

3. If, after a diminution the leucocytes again increase, it points to a recrudescence of the disease.

4. If the number of leucocytes diminishes suddenly and rapidly it points to a fatal outcome.

5. A marked hyperleucocytosis, combined with severe symptoms, indicate immediate operative interference.

6. A moderate leucocytosis with grave symptoms, calls for surgical interference.

Cazin stated that his experience warranted him in believing that those cases which showed no leucocytic increase were not pus cases.

A leucocytosis, however, should never be regarded as a pathognomonic sign in appendicitis, but should always be linked with objective and subjective symptoms.

SHIFTING DULNESS.

In *The Lancet*, February 25th, 1905, Godlee states that dulness in the back which shifts on placing the patient on his face or upon the opposite side, usually means that the pleura is healthy and that the cause of the dulness is subdiaphragmatic.

The dulness resulting from a localized empyema if there is no gas in the cavity, does not shift at all. The dulness from a pleural effusion shifts very little, if at all. The presence of pleural effusions limits or prevents the shifting of the dulness caused by solids or fluids below the diaphragm. A dulness which disappears under an anæsthetic must not be neglected, but it must be suspected that adhesions do not extend so far as they might before the administration be supposed to do. In a suspected empyema where the dulness disappears under the anæsthetic, the case will probably prove to be one of pneumothorax. In cases of intestinal

obstruction with much distention it is impossible to say whether or not there is free fluid in the peritoneal cavity because the flanks may be dull when the patient is lying on the back, but resonant in the upper flank when he is lying on his side.

PROSTATIC ENUCLEATION.

In the number of *The Lancet* just mentioned, Freyer calls attention to the great success of total enucleation of the prostate in advanced old age.

Of 134 patients 8 were octogenarians. Seven are alive and in excellent health and all able to retain and pass urine normally. The remaining patient, after recovering from the operation, died suddenly of heart disease. The author gives the details of the eight cases, with illustrations of the prostatic glands removed.

GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynæcologist Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

FIBROID TUMORS AND PREGNANCY.

The February number of the *American Journal of Obstetrics and Diseases of Women and Children* contains an article on this subject by Dr. S. Marx, which was read before the County Society of New York.

The doctor takes the position that with few exceptions fibroid tumors of the uterus should at all times, if possible, be treated before the advent of pregnancy, as their association with pregnancy forms a complication which must, in many patients, be looked upon, not as a benign, but as a malignant state. Their tendency to rapid growth, their likelihood to undergo sloughing and regeneration, and the great probability of such growths, when situated below the intermediary zone of the uterus, making an otherwise normal labor one of utter impossibility or fraught with the greatest danger, are but what we may have to expect in dealing with fibroids and pregnancy associated in the same uterus. No matter how small or insignificant the tumor may be in the non-pregnant state, no living being can tell, no matter what the location of the tumor, what we may expect during labor. Labor may be impossible, or, overcoming

that, we may lose our patient later from sepsis, due to sloughing of the tumor. But Nature is kind to the poor women with fibroid uteri, for many of them are incapable of conception, and when they do conceive, abort before full term.

Dr. Marx gives the history of a healthy, vigorous Italian whose previous labors, eight in number, had been supervised by a midwife; consequently, were probably normal. In her present pregnancy she came under the care of an able physician. At the end of a normal utero-gestation she went into labor and her physician upon examining her found that, instead of a foetal part presenting, the entire pelvic brim was blocked by a hard tumor. The os was found pushed high to the left, and the presenting part could not be felt. A Cesarean section was advised and accepted at once, the patient exacting a promise that the uterus be not removed. The operation was performed and a living child delivered. The convalescence was normal. Examination of the tumor and its relation to the pelvis was made at the time of the operation, and it was clearly shown that an intra-ligamentous fibroma was practically blocking the entire pelvic inlet. Two months after the section, an examination showed the remnant of the tumor to be situated in the right broad ligament and, as the result of a complete and rapid involution, it could just be made out, about the size of an ordinary bean. The advice to remove this nodule to prevent a recurrence, was absolutely refused.

Surely this case requires no comment but proves that even the smallest fibroid, no matter how insignificant, may present a barrier which may be almost insurmountable, and just as surely does it make clear the problem of treatment, both from a prophylactic and curative standpoint. Fibroids diagnosed before a pregnancy exists should be removed.

The writer further says in reference to pregnancy occurring in a fibroid uterus: "In fibroids at the fundus we may watch the cases with armed expectancy and, since they are usually non-provocative of mischief during labor, interference is seldom called for. Where they do give rise to trouble there is hæmorrhage, persistent and continuous, during pregnancy. Here the indication is vital, and when imperative the uterus should be emptied, or, better, removed."

Fibroids involving the dilating zone of the uterus demand instant interference, where their position is so low as to either obstruct the labor entirely or prevent the dilation of the parturient os. An attempt should be made to push them above the presenting part, taking care not to cause traumatism and, perhaps, necrosis of the tumor. When this complication occurs early, abortion or hysterectomy may be required. When met with at term, Cæsarean section, terminated by hystrectomy, may be necessary.

The third stage of labor is generally dangerous from hæmorrhage and sloughing.

The doctor concludes his paper with the following resume :—

1. Prophylaxis.—Every fibroid during the child-bearing period, with few exceptions, should be attacked by surgical means.
2. During Pregnancy.—Safe fibroids, i.e., those beyond the dilating zone of the uterus, should be carefully watched. Every complication during pregnancy, depending upon the fibroid, should warrant our attacking surgically the condition, or, at least, provoke us to the indication for emptying the uterus.
3. During Labor.—(a) Again safe tumors need watching. The resultant complications must be met energetically, but gently, as they arise, i.e., hæmorrhage, tardy labor. (b) Tumors which cannot be displaced, blocking the bony passage, warrant vaginal enucleation (seldom possible), or Caesarean section, followed by hysterectomy.
4. Sloughing and Necrosis.—This condition of a puerperal fibroid must not be mistaken for retained secundines. This doubt must be eliminated by exploration with the clean, aseptic hand. Retained secundines are always to be removed manually and, under no conditions, must the curette be employed, because of the great danger of laceration of the capsule, and consequent sepsis.
5. Sloughing and necrotic fibroids are always to be attacked surgically, either by enucleation or by hysterectomy.

BEARING-DOWN PAINS.

Dr. Bedford Fenwick, of the Hospital for Women, Soho Square, London, recently gave a clinical lecture on this subject to the Out-Patient Department. Among the causes of this symptom he mentions :—

Cervical Polypus.—He says this is an often-overlooked cause of “bearing-down”, although it was the most prominent symptom in the patient presented. She was also very anaemie.

This case was contrasted with another who complained bitterly of bearing-down pains, and who was found to be suffering from a small fibroid in the uterine walls. The latter by its mere weight pushed the uterus down just as the other growth, hanging from the cervix, pulled down the organ.

The symptoms in these two cases were relieved—in the one by removing the polypus, and in the other by lifting up the heavy, enlarged uterus by placing a well-fitting ring pessary.

Lax Abdominal Walls.—This, the writer thinks, is one of the most common causes of "bearing-down." In this case the patient was 45 years of age, had had seven children, and said that after each confinement this particular pain got worse, till it became almost unbearable. From the history of this case one would suspect she might be suffering from prolapse of the uterus. On examination that organ was found in good position, and there was no falling of the vaginal walls. The secret of her trouble was an extremely lax abdominal wall. There was considerable adipose tissue and the anterior wall dropped down over the pubes in heavy folds. The lack of support to the abdominal contents allows a considerable amount of dragging upon the intestines and mesentery.

These cases are treated by the application of the interrupted current and the use of a well-fitting abdominal support.

Chronic Constipation.—A patient was now shown whose chief symptom was "severe bearing-down pains," and on vaginal examination the pelvic organs were found in a healthy condition, nothing in either uterus or uterine appendages being found to account for the troublesome symptom. The rectum was found loaded, and the colon, as far as one could feel it, seemed equally distended. The doctor said, "It was evident that in such cases as this the one drug which could be used with advantage was the sulphate of soda—it answers much better with most women than the sulphate of magnesia. He then prescribed—

℞	Ferri sulph.....	gr. ii
	Sodae sulph.....	℥ss
	Tr. belladonnae.....	m.x.
	Aq. camph.....	℥ss

Pro dosis i, ter die, ex aq.

post cib. sumend.

A later report is, that the bearing-down pain of which she complained so bitterly had entirely passed away and she had improved in appearance and color, and increased in weight.

Urethral Growths.—The patient who illustrated this case was 53 years of age, and for the past three years, since the menopause occurred, she had complained of an increasing amount of bearing-down pain. Apparently this was her chief symptom. She gets worse after any exertion. The pelvic organs, on examination, were found quite normal for one of her age. There was found a flesh-like growth occupying the urethral orifice and extending half an inch below it. This is commonly termed a vascular growth of the urethra, an affection which is most common at her time of life. The cessation of the catamenial loss prevents the vascular system from being relieved, as it has been for some

36 previous years, and the natural consequence is that women suffer, at the so-called "change of life," from symptoms of abnormal vascular tension. They get the flushings of the face, the frequent perspirations, the great nerve depression, the various mental conditions, all and every one of which signify overloading of the vascular system. With these vascular growths there may be frequent micturition and sometimes bleeding in addition to the bearing-down pains. The only treatment for this condition is the removal of the growth freely with scissors, the patient being under an anesthetic, the base of the growth is seared well with Paquelin's cautery in order to prevent a recurrence.

Growths in the Bladder.—In cases of disease of the base of the bladder and especially when this takes the form of new growths, the symptom of "bearing-down pain" is often acutely complained of. The doctor here mentioned the case of a lady with a large stone in the bladder. The stone was crushed and washed out and the bearing-down pain was immediately and permanently relieved.

Vulvar Growths.—Various diseases of the Nabothian glands will frequently cause this troublesome symptom. Sometimes these are very chronic. It is perhaps only when they become much increased in size that the bearing-down pain becomes troublesome. After abscesses of these glands have been opened the after-treatment is important. The application of poultices to the labium often sets up considerable oedema, and tends to promote the formation of fresh glandular inflammation. The poultice should be small, should be applied simply to the opening of the abscess, and, as soon as the discharge has ceased, the poultice should be discontinued, and a dressing of dry lint applied.

Bearing-down pains may also be caused, either by an enlargement of the labia, a normal hypertrophy in fact, or by a pedunculated growth.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal.

ECLAMPSIA WITH REPORT OF CASES.

Dr. L. M. Allan reports, in *American Journal Obstetrics*, February, 1905, 33 cases of eclampsia and 10 cases of toxæmia of pregnancy in a series of 3,400 confinements in the In and Out-door departments of the Free Lying-In Hospital of the University of Maryland.

Nephritis was present in all the eclampsia cases and in 90 per cent. of the cases of toxæmia. 27 per cent of the mothers recovered and 59

per cent. of the children. In one case convulsions developed seven days after the death of the foetus, as could be proved by its macerated condition when born.

The author's conclusions, which sum up the results of this interesting study of clinical material are as follows:—

1. Eclampsia is due to the toxin which very probably has its origin in the liver.

2. Its origin is maternal rather than foetal.

3. Premonitory symptoms are always present.

4. The most constant and important premonitory symptom is frontal headache.

5. The diagnosis of toxæmia of pregnancy should be made early, and if the patient is under observation this can generally be done.

6. The mortality should be kept under 20 per cent.

7. Treat premonitory symptoms until, in spite of treatment, they get worse, then empty the uterus as in some cases this is the only method of stopping the progress of the disease.

8. Deliver as quickly as possible, consistent with cleanliness and preservation of the soft parts; bleed, removing from 300 to 700 c.c. as the case may indicate; infuse, giving from 500 to 1000 c.c. of salt solution, depending on the amount of blood withdrawn and the character of the pulse; this may be repeated later; morphia gr. $\frac{1}{4}$, hypodermically, to relax the muscular system; croton oil gr. i to ii in olive oil dr. i to dr. ii, followed by magnes. sulph. half ounce, in saturated solution, until effectual as a purgative.

9. Milk and water diet.

10. Other conditions treated systematically.

DISTURBANCES OF DIGESTION IN INFANTS, RESULTING FROM THE USE OF TOO HIGH FAT PERCENTAGES.

L. Emmett Holt, in *Arch. Ped.*, Jan., 1905, states that excess of proteid in milk, the mixture supplied to an infant has long been recognized as the chief factor in the production of disturbances of digestion. In this paper, Holt calls attention to the serious consequences of a too high percentage of fat in food mixtures.

Several cases are reported. In all, the infants at first thrived on high percentage fat mixtures, but usually suddenly severe symptoms of indigestion developed. These symptoms were general convulsions, enlargement of the liver, rickets and severe indigestion. In a few of the cases constipation was a marked symptom, the motions, when pass-

ed, were hard, dry and of a grey color, and consisted almost entirely of undigested fat.

In all the cases, the food mixtures administered were found to contain approximately 7 per cent. of fat. The cream used was obtained from the milk of a herd of Jersey cows. When the fat percentage in the food mixture was reduced to a low limit, the cases improved. In all the digestive disturbance was of such severity that recovery was slow.

Physicians may avoid such mistakes by ascertaining approximately the fat content of the milk, cream, or top milk used in making up food mixtures. To be successful in the feeding of infants the physician must learn to think in percentages.

Holt considered that infants differ considerably in their capacity to digest fat as in other respects. He considers that four per cent. is the limit for the average child, and states that he has never seen any advantage, but often much harm result from raising above this. The bad results of the higher percentages may not be at once apparent, but they are almost certain to come later

A CASE OF CAESAREAN SECTION WITH TWO UTERI AND VAGINAE.

Dr. Ranken Lyle, in the *Scottish Medical and Surgical Journal*, gives some "Notes on an interesting case of Cæsarean section at full term in a patient with two uteri and two vaginae." The woman was thirty-one years of age, and had had three abortions in successive years. Pro-lapsus uteri followed the ultimate abortion and was treated for seven months with a Smith-Hodge pessary. A year later her doctor found her in labor at full term. The os uteri was then the size of a florin, and was displaced forward by an irregular hard mass (the size of a closed fist) immediately in front of the sacrum. An aperient and an enema were given under the impression that it was due to hardened fæces, but with no effect on the obstruction. After the lapse of two hours, as the pains were strong and the head high up in the pelvis, and its advance impossible, Dr. Lyle was asked to see the case. On examination, the rectum was found empty and the mass was diagnosed as a fibroid in the pouch of Douglas. As delivery *per vias naturales* was impossible, Cæsarean section was decided upon. On opening into the abdomen, the uterus was found in front. It was opened and a living child with the placenta removed. The wound was closed and the mass being lifted up was found to be a myomatous uterus independent of the other and attached to the top of the vagina on the right side; it had one ovary and tube on the outer side, but none on the inner. There was a reflection of

peritoneum from the bladder directly to the rectum between the two uteri. The myomatous uterus was removed by supra-vaginal amputation, and the patient made a good recovery. The vagina was found divided by a complete septum which was attached below to the vestibule in front and to the perineum posteriorly. At the highest part of each vagina a distinct and separate cervix was found, the case being unique.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

LOCAL ANÆSTHETICS AND ANALGESICS IN OPHTHALMIC PRACTICE.

Dr. B. F. Church, in *Los Angeles Medical Journal*, of December, 1904, discusses the subject. He states that a local anæsthetic is differentiated from an analgesic by its power to render superficial surfaces painless to the touch and to have no effect upon deep seated preexisting pain. A local analgesic has no effect upon peripheral sensation but relieves pain. Cocain and holocain may be considered types of local anæsthetics; dionin, of local analgesics.

Hydrochlorate of holocain, in practical value, ranks next to cocain. It does not dilate the pupil, does not affect the epithelium of the cornea, and has valuable antiseptic properties. In one or two per cent. solution, it is superior to cocain as an anæsthetic for cataract operations. It penetrates more deeply than cocain and anæsthetizes the iris. It can also be employed by subconjunctival injection. It is especially useful by this method in operation for glaucoma. Its toxic effect is greater than cocain. Eucain B. has a limited use. It is less toxic than cocain and has some anæsthetic properties, but gives rise to marked hyperæmia and smarting when applied to the eye. It does not dilate the pupil and has no effect upon intraocular tension.

Tropocain has great anaesthetic properties, but has the disadvantages of Eucain B.

Acoin renders the eyes of lower animals anæsthetic, but has no effect upon the human eye, save when there is a solution of continuity. It is used to relieve the pain of ulcers and traumatisms. A solution of acoin is unstable.

Hydrochlorate of cocain is too well known to require notice.

Dionin has remarkable analgesic powers and is also a valuable acquisition to our therapeutic armamentarium. It is the hydrochloride of ethyl morphine, a homologue of codein, and is fully soluble in water. It is used in a strength of 1 to 10 per cent. in solution or ointment. Great

differences exist in persons regarding their sensibility to its action. A first application should not be stronger than 2 per cent. On account of the pain produced, it should not be dropped directly on the cornea, but into the lower conjunctival sac or preceded by cocain solution.

The physiologic action of dionin is that of a powerful lymphagogue and vaso dilater. It stimulates the vaso-motor and lymphatic systems of the eye. Lachrymation, chemosis and swelling of the lids characterize the use of this drug. The greater the reaction, the more beneficial the results. It has a wide range of usefulness, relieves pain, hastens absorption of exudates and assists atropine in dilating the pupil.

Weber (*Therapeutic Gazette*, Feb., 1904) gives a valuable report of his experiences with this drug and summarizes his conclusions as follows :—

1. That dionin possesses properties, at present inherent in no drug thus far used in ocular therapeutics.
2. That it is an analgesic of power and relieves iritis when atropine does not.
3. That the action of atropine is enhanced by dionin.
4. That it is a vaso motor and lymphagogue.
5. That it promotes absorption of exudates and debris after cataract extraction.
6. That it helps to clear up the cornea after interstitial keratitis.
7. That it seems without effect in other forms of corneal opacity.
8. That its influence upon the glaucomatous process is as yet unsettled.
9. That it should be widely used and the effects of such use reported in order that a correct estimate of its value may be made.

THE MEDICO-LEGAL ASPECTS OF OCULAR INJURIES.

Dr. H. V. Würdemann publishes an excellent and elaborate paper in *Ophthalmology*, January, 1905, which would occupy too much space for republication here, although it is worthy of it. He shows that the percentage ratio of eye to general accidents among iron workers is 9 to 10 per cent. ; in war, less than 1 per cent. The 11th United States census gives 20 per cent. of blindness caused by injuries, as against other causes. Compensation for injury to the eye should be regulated by the amount of economic damage.

Some of the recent judgments in the U. S. Appellate and Supreme Courts fixing damages for eye injuries were as follows :—

Section boss, lost one eye, working capacity reduced one half, \$5,000; porter, one eye lost, other somewhat injured, \$3,000; farmer, one eye lost, court assumed his earning capacity was diminished, \$5,000; salesman, eyes injured in train wreck, so as to incapacitate him from business, \$5,000; woman lost one eye in train wreck, \$7,000; man, total loss of sight, \$9,000; woman, young and pretty, stenographer, \$12,000.

Conclusions :—

1. The present usages of the estimation of pensions, insurance and damages at law, for injury to vision are wholly based on precedent and are purely empirical.

2. The relation of the visual act to the earning capacity is susceptible mathematical demonstration.

3. The effect on the earning ability of the individual may be determined by the particular injury to vision.

4. For the settlement of pensions and annuities the full economic annual damage should be paid.

GLAUCOMA, ITS ETIOLOGY, PATHOLOGY AND TREATMENT.

The term "glaucoma" is employed by B. F. Church, M.D., Los Angeles, to describe a condition in which there is an increased intraocular pressure. All symptoms and phenomena associated with this affection have their origin and are dependent upon this one condition, increased tension of the eyeball.

Glaucomatous manifestations are divided into three principal groups : 1. Primary glaucoma, in which the increased pressure manifests itself without an apparent pre-existing cause. 2. Secondary glaucoma, a result of some antecedent disease. 3. Congenital glaucoma, usually described as buphthalmos.

While it may be said that primary, or true, glaucoma is produced by the secretion or oversecretion of fluid from the epithelial lining of the ciliary body, evidence seems to bear out the theory that there must co-exist an obstruction to its outward filtration. There are three kinds of fluid within the eyeball : Intraocular, that filling the aqueous and vitreous chambers; blood contained in the blood vessels, and lymph in the lymphatic spaces of the uveal tract and the perivascular lymphatic channels. The amount of blood in the intraocular blood vessels is subject to constant variations, such as alterations in the blood pressure, pressure from the surrounding muscles, and changes in the shape of the iris and ciliary body.

The mechanism which governs the secretion and excretion of the fluids of the eye is so delicately adjusted that, notwithstanding the constant changes which alter the amount of blood in the intraocular blood vessels, or possible stimulation which may increase the secretive power of the ciliary body, intraocular pressure, or tension of the eyeball, in health remains practically the same at all times. This pressure equals a column of mercury 28 mm. in height.

Primary or true glaucoma may be divided into (1) acute glaucoma (acute inflammatory glaucoma), (2) sub-acute or chronic congestive glaucoma (chronic inflammatory glaucoma), (3) chronic non-inflammatory glaucoma (simple chronic glaucoma). Primary glaucoma is not an uncommon disease, and, according to Fuchs, constitutes one per cent. of all diseases of the eye. Acute inflammatory glaucoma and the chronic non-inflammatory variety, or simple glaucoma, have the following distinctive characteristics:

Inflammatory glaucoma is found most frequently in persons between 50 and 60 years of age. It does not occur in childhood and youth. More women are affected than men. Strongly myopic eyes have almost, if not complete, immunity from the disease. One eye alone may be affected. Whereas simple glaucoma sometimes occurs in children or before middle life. As many men have the disease as women. It is sometimes found in myopic eyes. Hydrophthalmos (buphthalmos) is a disease of childhood; is either congenital or develops in the first years of life, and generally in both eyes.

Etiology.—The predisposing cause of primary glaucoma has to do with age, sex, conformation and refraction of the eye and systemic conditions. According to Priestly Smith, not one per cent. of the cases begin earlier than the twentieth year. The few seen in young persons are generally monolateral. Heredity seems to bear a casual relation to the disease. The gouty and rheumatic diathesis and those who suffer from arterial sclerosis, chronic bronchitis and heart disease are liable to the malady. Many observers believe influenza to be a factor in the causation of simple glaucoma. There is a relationship between smallness of the cornea and glaucoma. The normal cornea has an average horizontal diameter of 11.6 mm., while the glaucomatous cornea, according to Priestly Smith, is 11.1 mm.

Exciting Causes.—Glaucoma may be excited in eyes predisposed to the disease by worry, overeating, insomnia, fright and neuralgia of the fifth nerve. It sometimes follows injury and hemorrhage into the uveal tract. Instillation of mydriatics, also oversue of ametropic or improperly corrected eyes may bring on glaucoma in one predisposed to the disorder.

The disease under consideration is one of the most serious maladies of the eye which we are called upon to treat. It sometimes comes on very insidiously, and when least expected. A warning, therefore, is given to the busy practitioner to not permit the existence or nonexistence of probable predisposed causes to overshadow the classical prodromes of this affection. It is our duty, and it behooves us all to be alert in discovering its prodromic symptoms and to meet the disease promptly when it arises.

The pathogenesis of glaucoma says W. H. Roberts, M.D., Pasadena, is so intimately associated with its pathology that in considering the latter the former must of necessity be taken up. In order to understand this disease it is necessary to keep clearly in mind the source of supply of the intraocular fluids and the paths they follow in the normal eye. The ciliary body has been proven by Leber to be the chief secreting organ of the eye, supplying a fluid which nourishes the lens and vitreous and replaces the aqueous. Snellen describes the course pursued by this fluid as follows:

The freshly secreted fluid stands in close osmotic relation to that which is contained within the thin membrane of the vitreous body. A slight excretion of fluid occurs at the back of the eye from the vitreous body into the lymph spaces of Schwalbe in the optic nerve. The chief stream passes over the lens and through the pupil into the anterior chamber, traverses the latter to reach the angle formed by the junction of the iris and the cornea, passes through the meshes of the ligamentum pectinatum, and by diffusion and filtration is taken up into the plexus of veins known as Schlemm's canal. There is no direct connection between the anterior chamber and the lymph spaces, which, according to Schwalbe, exist in Schlemm's canal. The influence of the nervous system on the pressure of the fluid is indirect. The pressure of the fluid regulates the outflow, so that when the afflux is increased a compensatory increase of the efflux occurs.

W. S. Fowler, M.D., Bakersfield, states that the action of eserine in glaucoma depends upon the abnormal position of the iris; by contracting the sphincter of the pupil it thins the iris, flattens its folds, and pulls upon its peripheral insertion, tending thereby to open the filtration angle. Cocaine is synergistic to eserine in glaucoma; for while its action alone dilates the pupil, it has the power, so much to be desired in this disease, of contracting the ciliary blood vessels and diminishing the sensibility of the ciliary nerves, both results tending to lower intraocular pressure, even strong solutions of cocaine may be used so long as eserine controls its pupil-dilating power. Morphine eases pain, lowers blood pressure, lessens secretion, promotes contraction of pupil and sleep. During sleep the pressure on the cerebral vessels falls and the pupils contract.

Aperients reduce tension and congestion, especially in patients with constipation. Warmth, food and rest all aid in promoting relief. Ice applied to the closed lids sometimes proves a useful adjuvant to other palliative measures.

To utilize our knowledge of this disease and our remedies I would suggest to the physician, upon diagnosing a case of acute glaucoma, the application of hot compress over the eyes, renewed frequently for from fifteen to thirty minutes; the instillation with the eyelids of several drops of

R Eserin salicylat	gr. i
Cocain muriat.....	gr. x
Aqua. destil.....	3 i

repeated every hour till pupil contracts, and the exhibition of morphin to relieve pain and produce sleep. A full hot bath to induce free perspiration, the patient being immediately placed in bed, is an excellent preliminary to this treatment, but an immediate and active treatment of the underlying and predisposing general systemic condition is of the greatest importance to supplement and assist the local applications.

Such measures actively carried out will frequently subdue a recent congestive glaucoma even of severe type, and may for a time restore the eye to an apparently healthy state; the cure, however, will rarely prove permanent, and with each recurrence the treatment is less likely to prove effectual; it is useful chiefly as a means of lessening the severity of the symptoms and of bringing the eye into more favorable conditions for operative treatment and the immediate benefit, however great, must not be allowed to obscure the fact that, in the majority of cases, a permanent cure can only be obtained by proper and timely operation.

Pilocarpin to the production of very free diaphoresis has been a very useful medicament, given subcutaneously until its effect was well established and per os in increasing doses daily thereafter until the intra-ocular tension falls within reasonable limits.

Treatment of the absolute stage of glaucoma can avail nothing beyond the relief of pain, and this object is more certainly, speedily and satisfactorily attained by the removal of the useless organ than in any other way. Treatment of the various forms of secondary glaucoma is usually surgical, and consists of some variety of iridectomy, the broad peripheral form being most generally useful; but even in these cases the course of treatment given for the acute primary form of the disease sometimes relieves the patient.—*California State Journal of Medicine.*

CURRENT CANADIAN MEDICAL LITERATURE.

The Canadian Practitioner, April, 1905.

HÆMORRHAGIC PANCREATITIS.

Dr. W. J. McNicholl, of Hamilton, gives a very careful account of the above disorder. He reports a case and follows this up with an account of the state of knowledge on the subject up to date. The case reported was that of a man, aged 45, with a good family and personal history. When attending a meeting he laughed very heartily at something that was said and did not feel well after that, passing a very restless night. He did not feel much inconvenience the week following. Very suddenly he was seized with violent pain in the upper abdomen. The patient was in a state of prostration with rapid, weak heart and cyanosis. The abdomen was greatly disturbed, particularly over the upper portion. There was great pain in the back, the lower dorsal and lumbar parts. On account of the extreme tympanites it was not possible to discover any mass, nor could the liver and splenic dullness be made out. A consultation was held and the diagnosis made of pancreatic hæmorrhage, or a perforation of an ulcer. An operation was advised which he declined at first, but later on accepted. It was performed in the evening of the same day. When the abdomen was opened it was found to be filled with a bloody serous fluid on which floated apparent fat globules. There were many small patches of fat necrosis, the pancreas was greatly swollen and much disorganized from a large amount of extravasated blood. The abdominal organs were found to be seriously distorted and damaged.

On making a postmortem on the body a large quantity of the above-mentioned fluid was found. There were many areas of fat necrosis. A gall stone the size of a cherry was found in the cystic duct at its junction with the common duct. Enormous quantities of blood were found in the retroperitoneal tissue. The pancreas was six or seven times its normal size. The gland was very much damaged. The lobules and acini were destroyed and in parts replaced by areas of necrosis.

The disease is usually met with in middle-aged men. The subjects are often obese and addicted to alcohol, and have a history of colicky pains. Among causes may be mentioned the hæmorrhagic diathesis, alcoholism, arterio sclerosis, syphilis, fatty degeneration in obesity, traumatism, embolism and thrombosis. A gall stone may become lodged in the ampulla of Vater and cause a flow of bile into the pancreatic duct,

giving rise to inflammatory changes and hæmorrhage. The escaped pancreatic ferments are very destructive to the tissues.

The only hope in these cases is in surgical intervention. As the symptoms are very urgent and likely to be much the same as in other conditions calling for surgical treatment, no mistake will be made by opening the abdomen. The diseases that should be borne in mind are perforation of gastric and duodenal ulcers, intestinal obstruction high up, and acute perforative appendicitis. The only rational therapy is to open the focus with the knife and drain the toxic and infectious exudate.

In the matter of the symptoms the writer directs attention to the following points : The attacks come on with great suddenness, there is usually violent colicky pain in the upper abdomen, nausea and vomiting. The abdomen becomes distended and tympanitic and there is usually constipation. There is tenderness over the entire abdomen, but specially in the upper portion. The temperature is at first subnormal, but later on rises above normal. The extremities are cold, the breathing is hurried and costal, there is cyanosis. The shock is intense from pressure on the solar plexus and abdominal nerve supply. There is marked pain in the back corresponding to the pancreas. Acute pancreatitis is to be suspected when a person perviously well, or affected with occasional attacks of indigestion, is suddenly seized with a violent pain in the epigastrium followed by vomiting and collapse, and in the course of twenty-four hours by a circumscribed swelling, tympanitic or resistant, with a slight rise of temperature. The article is an extremely interesting and valuable contribution to the subject of pancreatic diseases, which is now attracting a good deal of attention.

A REPLY TO DR. USLER.

This article by Dr. John Ferguson was read at the Toronto Medical Society, and has already appeared in the April issue of the Canada Lancet to which readers are referred.

Dominion Medical Monthly, March, 1905.

THE SURGICAL TREATMENT OF RENAL TUBERCULOSIS.

This article is from the pen of Dr. Howard A. Kelly, of Baltimore. In opening his paper he refers to the characteristic in the development of surgery that some one subject dominate the surgical thought for a

time, until it appears to be settled on solid ground when it is dropped and some other subject is taken up.

Dr. Kelly performed his first nephro-ureterectomy in 1893. The patient had had a left renal tuberculosis for 15 years. The kidney and ureter were removed and the bladder drained. She made a good recovery, and is still in excellent health. Since this case he has had 44 others.

Dr. Kelly is strongly of the opinion that, though uro-genital tuberculosis in the male may ascend from the bladder to the kidneys, such a course may be set aside as not occurring in the female; and that tuberculosis of the urinary organs in women is a descending disease, having its beginning in the kidneys. The kidney is infected through the arterial system. In the case of women, with the rarest exception, the course of the disease is from the renal cortex or papilla to the pelvis, the ureter and the bladder. In Dr. Kelly's cases there was only one doubtful case which began in the bladder.

With regard to spontaneous cure it is held that it is extremely rare and only in the sense that the kidney is destroyed and encapsuled in a mass of sclerotic tissue and the ureter obliterated. The rule is that renal tuberculosis is both progressive and fatal. This being the case, the best treatment is extirpation of the diseased organ.

The operation should be performed with as little delay as possible, only waiting until the patient is in fair condition. The disease tends to run a very chronic course and may last from 16 to 20 years. Sooner or later, however, the disease shows itself in some other part of the body, the lungs, or, much more frequently in the other kidney. In the case of the second kidney, the disease is likely of the ascending variety from the bladder up the ureter to the organ.

The diagnosis must be made with the utmost care. The only sure proof is finding the bacilli in the urine, which must be drawn by catheter to avoid the presence of the smegma bacillus. Even with this precaution this bacillus may be found in the urine. The x-rays should be employed with the view of determining if there be a calculus in the kidney. Palpation of the ureter through the vagina or rectum is helpful. If the disease is advanced it will be found thick and cord like, or even beaded. The cystoscope often reveals an inflamed condition of the mouth of the ureter and ulceration of it and of the bladder around it. The ureter orifice may retract to the posterior part of the bladder and is often circular and gaping like a pocket. The ureteral catheter may meet with obstruction, but if it can be introduced it may be left in position for several hours to secure a good sample.

The condition of the other kidney must be determined. If the bladder is not ulcerated, while the ureter catheter is in position, it should be

washed out and a sample of urine obtained from the other kidney. If the urine is normal it may be taken as satisfactory; but, if abnormal, the second ureter must be catheterized. When careful search has been made and no bacilli found, two guinea pigs should be injected, one in the peritoneal cavity, the other in the flank, with the fresh sediment from the urine. The amount of urea excreted by each kidney is also of importance as enabling one to decide which organ is functioning most actively. Cryoscopy of the blood and of the urine from each kidney may be of some use. The diseased organ may sometimes be palpated. Care should be taken to ascertain if there be tuberculosis in any other part of the body.

As to treatment, three courses are open to the surgeon. Nephrotomy, or opening the kidney and draining any abscess that may be found, is not at all successful. Partial removal of the kidney has been tried, but has almost always failed, as the removal of part of the diseased kidney fails to eradicate the disease. The third plan is the removal of the kidney and diseased ureter.

The patient is placed on an Edebohls cushion, bringing the loin into prominence. An oblique incision is made from the angle of the last rib downwards and forwards for 4 inches. The latissimus dorsi is cut or its fibres drawn aside. This exposes the tendinous area formed by the oblique muscles. On reaching this an artery forceps is forced in, opened and then withdrawn. This makes an opening through which the retroperitoneal fat protrudes. This opening is enlarged by a blunt dissection and pulling the parts asunder. The kidney may be exposed with very little bleeding and without the use of a single ligature. If the wound has to be enlarged, it may be done by a blunt dissection and the separation of the fibres of the external oblique with the fingers, and incising the internal oblique. When the kidney only is to be removed, the ureter is freed for about four inches, crushed with a clamp, and divided. The vessels are tied separately well away from the kidney. When the ureter must be removed, an additional opening is made into the pelvis, keeping outside the peritoneum. The ureter may be removed through this down to the bladder. The upper portion of the ureter and kidney are removed through the lumbar opening. A bridge of the abdominal wall is left between the two openings. Portions of the bladder have also been excised.

FINSEN LIGHT, X-RAYS, AND HIGH-FREQUENCY CURRENTS IN SKIN DISEASES.

Dr. Graham Chambers, of Toronto, discusses the above subjects in an interesting paper. He uses the Finsen apparatus. The lamp should possess penetrating power and germicidal power. The lenses are made of rock crystal which allows the ultra violet rays to pass through, glass

absorbing these rays. The Bang lamp lacks the power of penetration and is of very little use in treating deep lesions. Finsen light is very useful in the treatment of lupus, unless there be ulceration when the x-rays should be used until the ulceration disappears. The Finsen light may then be employed.

The x-rays he uses extensively and employs hard tubes, placed about 8 inches from the patient. The exposures vary from five to fifteen minutes two or three times a week. The x-rays are very useful in rodent ulcer, the healthy skin being protected by a shield. In deep epithelioma the x-rays should not be trusted as the sole treatment. The rays should be applied after excision. When there is rapid growth in skin epithelioma, arsenical pastes may be used, followed by the rays. In cocco-genic sycosis the application of a strong antiseptic ointment, at the same time using the x-rays five or six times. The hairs are then readily removed. In tinea tonsurans the application of an ointment containing iodine, sulphur, salicylic acid, and ammoniated mercury, together with the x-rays, will soon begin to cause the hair to fall out. This treatment will cure very obstinate cases in less than three months. Short exposures should be the practice, three times a week.

High-frequency currents were introduced into medicine by D'Arsonval. In this form of radio-therapy Dr. Chambers employs an Oudin-Dean resonator. D'Arsonval thinks that this form of treatment has a distinct effect on metabolism, increasing the carbon dioxide and the production of heat. It produces anæsthesia of the skin and relieves neuralgia and myalgia. Hyperæmia, œdema and vesication may result from this form of treatment. Dr. Chambers has found high-frequency current of distinct benefit in cases of lupus erythematosus. He cured four cases out of six, another is improving, while one was given the light treatment when this treatment had failed. The indolent cases with induration appear to be best suited for the high-frequency currents. The treatment was given once or twice a week by means of a Tesla's electrode. Pruritus ani has been benefited by these currents. In telangiectasis these currents, along with scarification, prove very useful. In alopecia areata, combined with antiseptic lotions, sparking by means of high-frequency currents has been found very helpful.

Upon the whole the writer of the article takes a very hopeful view of the treatment of skin diseases by these physical appliances.

The Montreal Medical Journal, March, 1905.

PRESSURE PARALYSIS.

This very interesting and important subject is made the basis of a very lucid paper by Dr. D. A. Shirres, of Montreal. His paper is a study of

a number of cases in actual practice : One cerebral, one spinal, one cauda equina, seven brachial plexus in adults, and six brachial plexus in children.

Before going into the history and treatment of these cases, he gives a succinct but clear account of the central nervous system and especially the part played by the neurones. This portion of his paper is useful and suggestive. He maps out the functions of the upper and lower motor and sensory neurones. The upper motor neurone is motor and inhibitory in function, while the lower motor neurone is motor and nutritional to the muscle fibre. When the lower sensory neurone is destroyed there is loss of sensation and also of the reflexes. When the upper sensory neurone is destroyed there is loss of sensation, but the deep reflexes are preserved. A careful study is given of the effects of pressure on the brain, on the cord at different levels, and on the peripheral. The cases reported bring out the features of these varieties of paralysis, such as spastic and rigid or flaccid and atrophied muscles, loss of sensation with and without loss of the reflexes.

NERVE GRAFTING AND THE NEURONE CONCEPT.

Dr. Mills, Professor of Physiology in McGill Medical Faculty, gives an interesting account of our knowledge on the subject of nerve suturing and grafting. He points out that nerves have a marked tendency to reunite when divided, and that it is often difficult to prevent this occurring. This fact is made use of in the efforts to secure restoration of function in a paralysed muscle. Experiments have shown that the peripheral end of one motor nerve has been united with the proximal end of another motor nerve and that the muscles so supplied have retained their power.

Certain principles are now generally accepted. Functional union does not take place between the central ends of two nerves. The peripheral ends of two nerves may sometimes unite. The central end of a nerve may unite with two peripheral nerves. Nerves may be so united as to be lengthened. Efferent nerves cannot be united with afferent fibres. The phrenic nerve can be united with the cervical sympathetic and the latter with the recurrent laryngeal.

The question of the autogenic regeneration of the distal portion of a divided motor nerve is fully considered. The arguments and experiment for and against its occurrence are stated. On the whole it may be accepted that the peripheral portion of a divided motor nerve does not regenerate unless it becomes united with a central portion.

AN UNUSUAL INJURY TO THE CERVIX UTERI DURING LABOR.

Dr. J. B. Browne reports the case of a woman who sustained an unusual injury during labor. The labor was dry, the pains were severe, and the cervix rigid. The posterior wall of the cervix became distended and ruptured, the child being born through the perforation and not through the os, which never dilated nor was it lacerated.

The patient did not make a good recovery. On the eleventh day, the patient was examined by speculum, when the true condition was revealed. The perforation was curetted so as to freshen the edges, and the parts brought together by sutures. The recovery was satisfactory. This is a very unique case. The causes advanced for the peculiar laceration are: the patient was a primipara, the labor was a dry one, powerful uterine contractions, and the direction of the head against the posterior wall of the cervix. The writer is of the opinion that the accident may have often been overlooked.

TRANSPOSITION OF THE VISCERA AND ATRESIA OF THE PULMONARY ARTERY.

Dr. John McRae puts on record a case of this nature. He mentions that the most common form of congenital heart anomaly is stenosis or atresia of the pulmonary artery. Atresia forms about one-sixth of the combined cases. In the case recorded by Dr. McRae the pulmonary artery was a mere fibrous cord. Vierordt found 12 such cases on record. These cases, of course, do not live long, usually dying within a week, but this case lived seven weeks and there is one reported that lived nine weeks. Of the other abnormality, the situs inversus, it is stated that there are about 300 cases on record. In the case reported, the heart was like that of the fish, one ventricle and one auricle.

A CASE FOR DIAGNOSIS.

Dr. James Bell, of Montreal, gives the clinical history of a unique case, where the diagnosis was very obscure. The patient was a young man of 31. In March, 1904, he felt a pain in the lower part of the sternum, radiating downwards. On 20 June, he consulted a physician who found slight tenderness on pressure. On July 9, he again consulted the doctor when three hard little nodules could be felt over the lower portion of the sternum. On August 15th, enlarged glands were found in the axilla, and on 25th a prominence along the lower border of the pectoral muscle, and the small nodules were ulcerating. The veins along the lower part of the chest were dilated. The case was clearly one of some sort

of infection. On 10th September, a gland in the axilla was removed and found to contain only inflammatory tissue. One of the ulcerating nodules was also removed and contained only inflammatory tissue. On 3rd October, the ulcerating nodules and the greater part of the right pectoral muscle were removed, and the muscle was found to be deeply involved. During all this time there was no suppuration. The leucocytosis rose to 22,000. Cultures were found to be sterile but a bacillus resembling a form of leptothrix was discovered. After a careful analysis of the case, Dr. Bell excludes glanders, tuberculosis, syphilis, malignant disease, and actinomycosis. He came to the conclusion that it was a granuloma, due to infection by some form of leptothrix.

The Maritime Medical News, March, 1905.

TREATMENT OF CASES BY X-RAYS.

H. D. Weaver, M.D., of Halifax, has an article upon this subject. He has treated 46 cases, and gives details of these. Some had only three or four treatments, while others had as many as eighty, and were under treatment for 21 months. In one case when pushing the treatment to destroy a malignant growth there was a typical case of x-ray burn or "white gangrene."

The hypertrichosis cases were fairly successful but the length of time that the treatment takes, also the risk of severe dermatitis, the extreme pigmentation, which may last for weeks, are great objections.

In all or nearly all the cases of carcinomata the relief of pain and the satisfaction to the patient in feeling that the disease was being fought, have been very great. And in several cases life was greatly prolonged, but he doubts if any of his cases will eventually be cured. In early cases of rodent ulcer and epitheliomata the treatment was very useful in his cases. In advanced cases, he thinks it may only restrain the disease.

He urges that the x-rays be used, where possible, after operation for malignant disease.

THE PRACTICE OF MEDICINE IN INDIA.

Anna M. Fullerton, M.D., of Punjab, India, gives an interesting account of the practice of medicine in India. She refers to the fanatical adherence to ancient customs and religious beliefs as defying the laws of science at every point. When one has lived in India for some years it becomes quite apparent why the British Government has not been able to suppress epidemics of the plague and cholera. The streets of India are crowded with those who are the victims of incurable diseases, once cur-

able, but now hopeless through neglect. Many are maimed from brutality, and there are very many children who are blind and deaf because of neglect.

Scurvy, diarrhoea and gangrene, the result of chronic starvation, abound. About one-fifth of the population, or 60,000,000, are insufficiently fed, even in years of ordinary prosperity. Some of the rulers are very rich, but a vast number of the people are groveling in poverty. The average income of an East Indian laborer is \$1.50 a month.

Famine is frequent in some part or other of the country. The plague, eruptive fevers and pulmonary diseases, including tuberculosis, are very prevalent and fatal. During the long hot season dysentery, cholera, and intestinal diseases, and malaria are scourges of great severity.

Demon possession is firmly believed in and appear to be only exaggerated cases of hysteria. Fortune telling and the belief in omens add to the dread of the average Hindu.

Surgical diseases and accidents are very common, the treatment of which is left to the barbers who may bleed, use leeches, or apply the cautery. For tumors they do nothing. There is strong prejudice against the foreign doctor in cases requiring operation.

Leprosy, syphilis and many forms of skin diseases are very common.

Herb doctors are numerous, called "hakims," who combine with their practice chants, incantations and offerings to the gods.

Of the 300,000,000 of India's population, 120,000,000 are women, and of these at least 50,000,000 are Zenana prisoners, the high class secluded women, to whom male physicians can never have access. These women suffer terribly through the poor attendance they receive from the native midwives. Rickets and scrofula are very prevalent among these women and add to the troubles of childbearing.

Very early marriages cause a vast amount of disease. Brahmin girls must marry between 7 and 11. This frequently leads to sterility from disease. These girls become pregnant and then the uterus undergoes superinvolution.

The government wish to overcome some of these evils by the establishment of hospitals. Medical schools have been established, also, in Calcutta, Bombay, Agra, Lahore and Madras, where those with sufficient education may be trained for the medical profession. Many special hospitals have been erected for the treatment of women, and known as "Dufferin Hospitals," after Lady Dufferin who lived in India as wife of the Viceroy. In many of these institutions the distinctions of caste are firmly drawn and the lower castes fare badly. In many instances religious fanaticism interferes with the treatment and prevention of disease.

The people are very ignorant, dirty, and prejudiced. It will take a long time to spread western ideas among them. The hospitals and medical colleges are doing much to introduce new views. In this respect the medical college for women at Ludhiana deserves special mention.

OTHER PAPERS.

The address of Dr. F. E. Daniel at the American International Congress on tuberculosis contains some good advice along the lines of prevention. He speaks of the disease going along with the conditions of civilization. The utmost care should be taken with cars, passenger boats, public buildings, etc. Every effort should be made to eradicate the disease, by prevention as well as cure.

Dr. E. D. Farrell, of Halifax, gives the report of an interesting case of perinephritic abscess. There was doubt as to the case being one of appendicitis, psoas abscess, or perinephritic. Some pus was obtained by aspiration which was staphylococcus pyogenes aureus. This helped to settle the diagnosis in favor of perinephritic abscess, as the appendiceal abscess would likely contain the colon bacilli, and the psoas usually contains no bacilli until it is opened. The abscess was opened by an incision as for nephrectomy. The patient recovered.

Dr. W. D. Finn, of Halifax, reports the case of a girl who had a greenstick fracture of both bones of the forearm. The arm was straightened and put on splints. The girl was 14 years, which is rather unusual for such a fracture. The recovery was excellent.

An interesting judgment is recorded, a person, named Goelette, had engaged Dr. Doucette to treat his wife for \$20. Dr. Doucette called in Dr. Pinault to perform an operation. This was skilfully done and the patient made a good recovery. Dr. Pinault had to sue for the recovery of his fee, the defendant claiming that he had engaged Dr. Doucette for a definite amount to attend his wife. The Judge gave a verdict in favor of Dr. Pinault.

QUEBEC MEDICAL NEWS

Conducted by MALCOLM MACKAY, B.A., M.D., Windsor Mills

The contract for the building of the new Alexandra Hospital in accordance with the plans prepared by the architects, Messrs. Edward & Maxwell, has been awarded by the governors to Mr. John Quinlan. By the awarding of this contract, approximating in amount to \$250,000, the committee has assumed a liability that would have deterred many less resolute than the gentlemen composing the board, but the necessity is so great, and the safety of the community so much at stake in case of an epidemic of infectious disease, that the matter of lack of funds to meet the obligations incurred could not be allowed to further block the way in the accomplishment of the desire to provide suitable accommodation for this class of cases.

The Royal Victoria Hospital fire has imposed upon the committee the absolute necessity of obviating the occurrence of such a calamity in this new institution. While this, from the point of view of construction, does not present any very serious obstacle, yet the additional expenditure that such a plan demands, has had to be faced, and the Board has wisely decided to employ only the most thoroughly fire proof method of building that recent experiences have proved to be absolutely secure, believing that the public will approve of their decision and will come to their aid in a generous manner.

The property is situated at Point St. Charles, about half a mile above the Victoria Bridge, bounded by the river on the south, by Char-ron St. on the north and on the east by Nelson St., the lot having a front-age of 479 feet.

The buildings are to be grouped about a main axis, running through the centre of the lot and distributing symmetrically on each side of this axis.

The administration building occupies the centre of the group nearest the street, a building 72 ft. by 40 ft. From the rear of this building leads a covered and heated corridor that passes around the kitchen building immediately behind the administration block, and gives access to the three main pavilions, namely the measles, scarlet fever and diphtheria blocks while the erysipelas and observation departments are situated to the east and west respectively of the administration building, and connected with the same by similar corridors.

As to the construction of the building, terracotta, steel, concrete, brick and stone are practically the only material which will be used. The

floors are to be monolithic with rounded corners, all walls and ceilings will be in hard plaster painted and enamelled white, the only woodwork used being the sashes and doors, and these latter will be of veneered hardwood without panels or mouldings. Special attention has been paid to the ventilation, and fresh, moistured, screened and heated air is provided at the head of each bed. Boyles' ventilators cap each duct and the Johnson system of temperature regulating apparatus is to be used, whereby a change of half a degree will regulate the steam supply accordingly. The accommodation will be about 125 beds or 185 in case of emergency.

At the graduating exercises of the Royal Victoria Hospital nurses, Lord Strathcona, in the course of his address, announced that a new residence would be built at the western side of the hospital for the accommodation of the nurses in training. The new home will be capable of housing about one hundred nurses and is to be fitted up in the most modern fashion with every comfort for the occupants. Competitive plans have been called for and probably the work will be commenced this year. This addition to the hospital will be most valuable, as for years hundreds of candidates for admission to training have been refused through lack of room. The work of the hospital has also increased so materially that a larger staff of nurses has been found to be essential. Especially true is this in regard to the operating room nurses. The large and magnificent new operating theatre requires a considerable increase in the staff, and, when the old theatre has been completely rebuilt, there will be still greater demands upon this portion of the nursing body and consequently the new building will be a very great improvement upon the present plan.

On April 14th Dr. Osler addressed the McGill Medical Society in the Molson Hall. His subject was "The problems of the medical student before and after entering medical practice," and he was listened to with great attention by an audience which filled the hall to its utmost capacity.

Dr. Osler knows how to interest students and his first remark, "No one is more interesting as an object of study than a student," made every member of the medical society—founded by the way by Osler in '77—sit up at attention. Many were the quotations, the epigrams, and the *bons mots*, which were delivered in the well known fascinating style of the Canadian student's ideal.

"To no man is it given to know the truth, the whole truth, and nothing but the truth. But what is a student but a lover courting its fickle systems? The truth is the best you can get with your best endeavor."

"Keep your heart whole and be always a student. You and your professors are all students together." "The education you are getting is not merely a college or medical one, but a life course, ending only with

death. You may die in training from lack of food—worse, you may be mentally still born—but what you become depends upon whether you starve your brain after you leave college or not. This latter study is hard. There is too much wayside fruit in our educational market. With Chrysostom I would say 'depart from the highway, for it is hard for a tree that grows by the wayside to keep its fruit until it be ripe.' "

"The true student is a citizen of the world whose soul is too precious to be restricted to any one country."

"You must not confine yourselves to book knowledge, study men. That will order experience and give certainties instead of surmises, and enable every man to judge his own line of work."

"Your study is human life, its orders and disorders, and you to put it to rights."

"There are three things a practitioner needs, a note book, a library and a quinquennial brain dusting."

Such were a few of the sentences in an address which appeared far too short. The "brain dusting" above mentioned was to consist in a periodical sojourn at a hospital to get in touch with new ideas and treatment.

The lecturer considered the greatest danger to be in the break between college and active life. If the first year was one of study and work it might mean a life of great usefulness; but, as a general rule, either from incapacity or distaste, this was not the case. To avoid this, he strongly advocated the British custom of old practitioners taking juniors as partners. This was the best way to cultivate that best flower of profession—a cultivated general practitioner, which was the desideratum he hoped for the most of his hearers.

His final precept was that the practice of medicine was pretty much what the doctors made it and either a perpetual pride and joy, or a perpetual nuisance; and it could be made the former by a perpetuation of the student spirit.

Principal Peterson moved a vote of thanks to the distinguished lecturer, in which he congratulated Dr. Osler that as yet he only looked *thirty-nine*, and voiced the gratitude of McGill that he had returned once more to his alma mater before being translated to another world.

In the evening, a banquet was held in the Windsor Hotel—the annual dinner of the Medical Faculty. Some 250 covers were set and the function passed off amid the greatest enthusiasm. Dr. Osler in the course of his remarks spoke of the great advances which had been made in the faculty of medicine since he left some twenty years ago, and considered that much of the success of the medical school was due to the hospital facilities enjoyed by the students, stating that Montreal had two of the

best equipped hospitals on the continent. He also touched upon the need of funds, and the dependence of the college upon the generosity of the public, as student's fees were entirely inadequate for the support of such an institution.

In conclusion he said that the reception tendered him by the students and faculty of his old alma mater gave him courage to go across the water, and he was glad to know that he carried with him the good will of the students of old McGill.

Dean Walton responded to the toast of "Old McGill" and referred to Oxford and its tradition at some length, suggesting that Dr. Osler should cable "You needn't take it" to the Oxford dons; as many were of an advanced age.

Dr. Mills responded to the toast of the medical faculty and alluded to his student days with Osler under Bovell, of Toronto, and Howard, of Montreal.

Sir James Grant and Dr. Chipman were among the other speakers, and the banquet is recorded among the most successful in the history of the medical faculty.

The Medical Faculty of McGill University has arranged for a very complete post-graduate course of instruction for the month of June. This is the tenth year of this course. This year, however, special efforts will be made to render the course very complete and satisfactory in every way. Those taking the course may select the subjects desired and pay for these only. The course will be largely clinical and practical. Arrangements have been made for an abundant supply of clinical material at the different hospitals.

The course will begin on Monday, June 5th, and be carried on until Friday, June 30th.

Dr. Fleury, who has been medical superintendent of the Notre Dame Hospital for the past four years, will leave shortly for Europe to pursue a course of study. Dr. Demers, who is at present one of the house surgeons of the hospital, will succeed him as superintendent.

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EDITORIAL.

ALCOHOL AS A MEDICINE.

"Fifty years ago alcohol was regarded as a necessity of life by the man in the street and as an indispensable drug of omnipotent value by the physician. Nowadays all that is changed. Alcohol is looked upon as a luxury for the healthy man and a stimulant of determinate value, useful in some forms of ill-health. On the other hand, it is recognized as the cause of a vast number of pathological disturbances, functional or organic, and as a potent factor in disease, premature senility, early death, insanity, and an innumerable array of more or less deadly maladies." Such is the language of the *Medical Press*, with which the vast majority of the medical profession agrees.

Much has been said and written upon the amount of alcohol which the adult can tolerate or use without harm daily. Dr. Francis E. Anstie laid down the rule that one and one-half ounces was the quantity. Recently, Professor J. J. Abel, of Johns Hopkins University, lays down the quantity as one or, at most, two glasses of wine (10 per cent. alcohol), or one pint of beer, or their equivalents in terms of alcohol, in the twenty-four hours.

The Collective Investigation Committee of the British Medical Association reported as follows as the result of a careful study of the subject :—

"That habitual indulgence in alcoholic liquors beyond the most moderate amounts has a distinct tendency to shorten life, the average shortening being roughly proportional to the degree of indulgence.

" That total abstinence and habitual temperance augment considerably the chance of a death from old age or natural decay without special pathological lesion."

If we turn to the records of the old and large life insurance companies, where there is a large collection of lives to draw conclusions from, we find that in Great Britain there is a difference of 25 per cent in favor of the abstainers as compared with the non-abstainers; and in the United States there is a favorable balance of 18 per cent.

By means of delicate and accurate tests the experimental psychologist

can determine the mental activity of an individual. Tests of this nature have been conducted under competent observers and show that the daily consumption of one and one-half ounces of alcohol perceptibly lessens mental capacity and activity. This effect is noticed for at least eight days after the cessation of its use. This makes it quite clear that in health alcohol, even in small quantities, acts as a narcotic and a depressant.

Turning to the change of opinion in the use of alcohol in disease, several important facts must be noted. In the first place, in the Temperance Hospital in London the results are as good as in any other British hospital. In the Massachusetts General Hospital in Boston in 1884 the yearly drink bill for each patient was \$1.84, while in 1900 it had fallen to 29 cents with results satisfactory to all.

Some fifty years ago, arising from the teachings of Liebig that alcohol was a food, it was not uncommon to give from 30 to 45 ounces of brandy per day to fever and pneumonia patients. This practice is happily gone forever. Sir William Tennant Gairdner of Glasgow was the first to raise his voice against such over dosing with alcohol. In his book, *The Physician as Naturalist*, he dealt a crushing blow to the teachings of such men as Todd and his school. In 1862, W. T. Gairdner began to discontinue the use of stimulants in fever cases. During that year he treated 189 fever persons under 16 with only one death, that of a girl who was moribund when brought into the hospital. The excessive alcohol treatment under Todd, of Kings Hospital, gave a death rate thirty times as great.

Briggs of Johns Hopkins has shown that alcohol by irritating the mucous membrane of the mouth and stomach, causes a temporary rise of blood pressure, lasting about thirty minutes. This is clearly not what is required in an acute, exhausting disease. A dose of capsicum will do as well and the rise of blood pressure is more lasting, while it is not followed by the reduction noted in the alcoholic rise. According to the teachings of Ringer, Sainsbury, Martin, Hemmeter, Wilks, Hill and many others, alcohol is a cardiac depressant and paralyzant and not a direct cardiac stimulant. Alcohol increases the diastole and lessens the systole of the heart. It has received the reputation of being a stimulant from the fact that when first given in fever cases it appeared to do good, a circumstance that was attributed to its stimulating influence, but which was really due to its sedative effects. Take the case of a person in the late stage of cardiac failure in valvular disease with dropsy, visceral engorgement and orthopnoea, the administration of alcohol, as Wilks has shown, always makes the condition of the patient worse; whereas purgatives and strychnia improves the condition. This would appear to prove that alcohol is not a cardiac tonic or stimulant.

If alcohol could be of any use at all as a cardiac stimulant one would expect good results from its administration in the late stage of fever with dicrotic pulse and low blood pressure. But clinical experience shows that it fails to raise the blood pressure in such cases. This is true equally when given by the mouth or by the hypodermic method. Large quantities of alcohol produce this very condition of pulse met with in the late stage of severe fever. We may take it that alcohol cannot raise the blood pressure, whether it be normal or subnormal to begin with.

Much has been written about the antipyretic effects of alcohol. It has been settled that any influence of this sort which it may possess is not due to an inhibitory power over tissue change or metabolism. It has, however, a decided influence on the temperature of the body, but only through its power to relax the cutaneous vessels and allow more blood to accumulate on the surface of the body. Body heat may in this way be dissipated if the environments of the person is favorable to loss of heat by radiation or conduction. Alcohol is, therefore, not an antipyretic in the true sense. It only acts on the temperature through the vaso-motor nerve system, and the advantage may be bought at too high a price.

Alcohol may prove useful when applied to the lips to cause a reflex rise of blood pressure in syncope or sometimes as a narcotic, or again to dilate the surface vessels when the skin remains cold after exposure. It may be given a visceral neuralgia, but this may lead to its too frequent use. Professor Munro of Glasgow sums up an able article in the following words: "Alcohol is a medicine with certain useful properties, but the limitations of its usefulness are far greater than is ordinarily supposed; and even where it is useful, there are generally other remedies which are also useful and, at the same time, more safe."

Sir William Broadbent, in a carefully prepared article on "Alcohol as a Medicine," in which he takes a very judicial view of the question, and evidently is disposed to give as much credit to alcohol as a medicine as can be allowed, still speaks with great reserve, and his words of caution exceed his words of praise. "The action of alcohol which we call stimulant is," says Broadbent, "therefore, indirect, and the most conspicuous evidence is dilation of the arterioles and capillaries, which allows of freer supply of blood to all the organs. There is a concomitant increased action of the heart, due partly, if not mainly, to the diminished resistance in the peripheral circulation. A temporary general acceleration of the circulation and increased afflux of blood to the brain and viscera generally thus constitutes the action of alcohol of which we take advantage clinically. It may permit of the evolution of functional energy, but this is provided at the expense of blood and tissue, and is not supplied by the alcohol."

Mr. Pearce Gould, in speaking of "Alcohol in Surgery," says: "For

many years I have dispensed almost entirely with alcohol as an aid in surgical treatment. As soon as I made trial for myself of the effect of withholding alcohol, I found how entirely overrated its value was, and how gravely mistaken had been the teaching. It is commonly held, I believe, that alcoholic stimulants are of special value in all forms of septic inflammation, such as pyæmia, erysipelas, septicæmia and hectic fever. I believe that this is founded solely upon tradition unsupported by any trustworthy evidence, and untested by experiment or experience." And, again: "I think that of all the bad uses to which alcohol is often put as a therapeutic agent, none is worse than its employment in any form of infective disease. Even in cases of uncontrollable suppuration, I have found nothing but good from withholding all alcohol."

CEREBRO-SPINAL MENINGITIS.

The recent epidemic of cerebro-spinal meningitis in New York and adjacent places has attracted a good deal of attention. This disease appears in the epidemic and sporadic forms. The membranes involved are the arachnoid and the pia. The veins, arteries and lymphatics are affected, and also the surface of the brain, giving rise to a true meningo-encephalitis. In the vast majority of the cases the meninges of the cord as well as those of the brain are attacked.

While a number of bacteria may cause acute meningitis, the chief ones are the diplococcus intracellularis, the pneumococcus and the streptococcus. The diplococcus intracellularis meningitidis was discovered in 1887 by Weichselbaum. A few years later, Jäger proved that this organism is the specific cause of epidemic cerebro-spinal meningitis. It appears as a diplococcus, but often groups in fours as a tetrad. It is practically settled that all cases of primary meningitis are caused by the diplococcus intracellularis. Secondary cases of meningitis are caused as a rule by the pneumococcus, the streptococcus, or some other form of bacterium.

The germ has low resistance to unfavorable conditions and cannot withstand light or drying. This is a very important feature in the life-history of the diplococcus intracellularis. It must be propagated from person to person in the sporadic form of cerebro-spinal meningitis, otherwise the germ would die out and epidemics would be impossible. These sporadic cases are the connecting links between the epidemics. It would appear from careful investigation that the sporadic form of the disease is much more common than has been generally considered. Epidemics of this disease may be explained on the assumption that under certain condi-

tions the infection becomes peculiarly active or virulent, or the resisting power of the individual is lowered.

The mortality varies in different epidemics, and has been estimated to vary from 20 to 75 per cent. It is more than likely that the latter figure is nearer the truth than the lower one. One epidemic gave a death rate of 65 per cent. When the disease appears in the sporadic form the death rate is much lower than when it appears in the epidemic form. Sporadic cases may be often overlooked and no accurate diagnosis made. In this way it is difficult to determine the true rate of mortality. When acute meningitis is caused by the pneumococcus or the streptococcus it is usually secondary to disease caused by these organisms in some other part of the body; and it is further noticed that the mortality is much higher in these secondary cases than in primary meningitis. The highest mortality is experienced in the specific form of the disease in the months of March, April and May. These are also the months in which pneumonia prevails, so that it would appear that the pneumococcus and the diplococcus intracellularis reach their maximum activity and virulence under somewhat similar atmospheric conditions.

There is a well-defined inflammation of the meninges. This is most marked along the base of the brain, around the crura, the pons and the cerebellum. It also extends over the lateral aspects of the cerebral hemispheres. In the very acute cases there may be little else than intense hyperæmia of the meninges and cortex. In cases lasting about a week there is an abundant exudation of serum and pus. In chronic cases the œdema of the affected parts is very pronounced. The coverings of the cerebellum are generally very much involved in these inflammatory changes. The extension of the disease to the cord affects the medulla and the posterior aspects of the cord mainly. The more acute the case is the greater will be the tendency for the exudation to be purulent, whereas in the more chronic cases much of the exudation is sero-fibrinous with disintegrated pus cells. There are also found distinct evidence of disease in the brain, cord and nerves in the form of pus and cell infiltrations.

Dr. Councilman, in his article in the *Jour. Am. Med. Association*, states that diplococcus intracellularis has been found in the nostrils of those not suffering from the disease. It would appear from this that the infecting organism is transmitted in some way through the air. But there may be other channels by which the germs find entrance into the system.

The disease is not confined to man, as it has frequently proved fatal to horses, dogs, rabbits, swine, foxes, poultry. Some epidemics in man have been preceded by the disease in lower animals.

THE ETIOLOGY AND TREATMENT OF CANCER.

Professor Doyen of Paris is a firm believer in the bacterial origin of cancer. It is his opinion that the cells increase in numbers under the influence of the organism, as do the cells of the embryo under the impetus of the spermatozoon. From time to time Professor Doyen has read or published papers advocating his views. He maintains the micro-organism which causes cancer is easily cultivated in a bouillon of lactating cow's udder with one per cent. of peptone and glucose added. The organism is found in the juice of cancerous growths, in the degenerating cells of such, and in the lymphatics when they become involved.

Dr. Doyen has succeeded in causing growths to appear as the result of inoculation. He reports examples of a white mouse, a monkey, a second white mouse, a guinea pig, a white rat, and a second white rat.

Cultures are made over a lengthy period. Bouillon is inoculated with these and kept in the incubator ten or twelve months. These cultures are used to inject the horse with. After repeated injections, a serum is obtained for the treatment of cancer. When a cancerous patient is injected with this serum there is a distinct reaction. The effects of these injections are quite remarkable. The tumors decrease in size and become more freely movable. In many cases the condition of the patients has been so improved as to justify the statement that a cure has been accomplished.

In cases that cannot be operated upon, or where the operation cannot be made complete, the employment of the serum is strongly advocated. It is of great value in the way of preventing recurrence.

Superficial cancers of the skin can be best cured in this way. He claims that it is superior to the x-rays.

Early cases of the mucous membranes, the glands, and internal organs should be removed by operation and the serum used to prevent return.

Progressive cases that are too far advanced for operation, or from their location render operation impossible, respond often very well to the treatment by the serum. In course of time the tumor may be so arrested and reduced in size as to permit of its being removed. Small outlying nodules will disappear under the treatment and need not be searched for at the time of the operation.

Widely spread and multiple cancers of the skin, and cases with advanced glandular and visceral complications are the least likely to derive any benefit from the treatment. It should be continued in such cases for years, and in some instances the disease may be held in abeyance.

Dr. Doyen reports 242 cases treated with the serum. Of these, he

reports 42 which must be regarded as cured. Many of these were bad cases for any form of treatment. Doyen claims that no other form of treatment could yield such good results. He hopes to perfect the serum to such an extent that it can be used as a preventive of cancer by creating immunity.

THE STATISTICAL IMPORTANCE OF GONORRHOEA AND SYPHILIS.

It is not until the results of a disease are reduced to figures that we really grasp its importance. When we showed some time ago that there were 8,000 deaths in Canada annually from tuberculosis; and that the value of each life, on the average of the earning capacity of those who die of the disease, was equal to a present worth of \$6,000, making a grand total loss of \$48,000,000 a year, the public really awakened to the seriousness of the problem.

Let us now take a glance at the mathematical side of gonorrhoea and syphilis. Sir William Gowers, in his Lettsomian Lectures, said that there were in London about 500,000 persons who had contracted syphilis. It is estimated that there are 200,000 cases of gonorrhoea in New York city, that 80 per cent. of the deaths of women from pelvic disease is due to this disease, that 50 per cent. of involuntary childless marriages is the result of gonorrhoea, and that it causes 20 per cent. of all blindness. It has been estimated that the expenses and loss of time, arising from venereal diseases in Prussia amount to \$21,000,000 annually.

By taking the returns from various armies much information is obtained. For every 1,000 admitted to the following armies the ratio was found to be: Germany, 27; Russia, 36; Japan, 36; France, 40; Holland, 48; Austria, 61; United States, 73; and Britain, 173. Primary and secondary syphilis prevailed to the following extent in every 1,000 admissions to the armies: Germany, 5.5; France, 9; Russia, 13; Italy, 13.9; United States, 16.8; Holland, 14.8; and Britain, 101.

Syphilis is the cause of a very heavy death rate in some countries. In France one-seventh of the population have the disease, and the mortality among infants born of syphilitic parents is often over 80 per cent. There are about 150,000 syphilitics in Berlin, 225,000 in New York, and in some other places the condition is even worse. It is believed that 15,000 of the blind in the United States owe their affliction to gonorrhoea.

Towards the suppression of this frightful spread of disease various plans have been advocated. The licensing of places of prostitution has always met with the opposition that it recognizes the vice and places it under the auspices of the law. By some it has been urged that venereal

diseases should be reported and placed under official observation. It has also been claimed that free state treatment would lessen the evil results of these diseases by early and efficient treatment. Perhaps early education regarding these diseases is the best course for the present. In the State of Michigan each year the State Board of Health sends out instructions to all the teachers which enable them to properly inform the children attending the schools.

We think that some steps should be taken in this country to place in the hands of the teachers suitable circulars regarding all the infectious and contagious diseases with the instruction that children be taught the simple facts regarding them.

NEW AND NON-OFFICIAL REMEDIES.

At its meeting of 1904 the American Medical Association appointed a large and competent committee to be known as the "Council on Pharmacy and Chemistry." This committee is to report on the many non-official drugs and combinations on the market for physicians use. Preparations which conform to the standard of the rules adopted by the committee will be admitted into the book which is to be published, under the auspices of the committee, by the *Journal of the American Medical Association*. The rules are as follows :

RULE 1.—No article will be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article, be furnished for publication. (Sufficient information should be supplied to permit the Council to verify the statements made regarding the article, and to determine its status from time to time.)

RULE 2.—No chemical compound will be admitted unless information be furnished regarding tests for identity, purity and strength, and, if a synthetic compound, the rational formula.

RULE 3.—No article that is advertised to the public will be admitted; but this rule will not apply to disinfectants, cosmetics, foods and mineral waters, except when advertised in an objectionable manner.

RULE 4.—No article will be admitted whose label, package or circular accompanying the package contains the names of diseases, in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated. (This rule does not apply to vaccines and antitoxins nor to advertising in medical journals, nor to literature distributed solely to physicians.)

RULE 5.—No article will be admitted or retained about which the manufacturer, or his agents, make false or misleading statements re-

garding the country of origin, raw material from which made, method of collection or preparation.

RULE 6.—No article will be admitted or retained about whose therapeutic value the manufacturer, or his agents, make unwarranted, exaggerated, or misleading statements.

RULE 7.—Labels on articles containing "heroic" or "poisonous" substances should show the amounts of each of such ingredients in a given quantity of product.

RULE 8.—Every article should have a name of title indicative of its chemical or pharmaceutic character, in addition to its trade name, when such trade name is not sufficiently descriptive.

RULE 9.—If the name of an article is registered, or the label copyrighted, the date of registration should be furnished the Council.

RULE 10.—If the article is patented—either process or product—the number and date of such patent or patents should be furnished. If patented in other countries, the name of each country in which patent is held should be supplied, together with the name under which the article is there registered.

The need for such information cannot be denied. Preparations are poured forth at such a rate that it is quite impossible for the physician to keep himself familiar with them. Some of these preparations are of undoubted value and reliable information regarding them should be available to the hands of the busy practitioner. On the other hand there are many drugs and combinations that are of questionable utility and which could not stand the test of being examined by such a committee, making known the composition of these. The work of such a committee will have the happy effect of putting off the market many of the so-called remedies that are constantly pushed under the notice of the doctor. Further, it may show that many of these preparations with loud-sounding names are very common products, and quite familiar under other names. It will be possible to separate the wheat from the chaff. The exploitation that has been done in many instances is very objectionable, and has been able to effect an extensive sale for some very inferior preparations.

There are, however, some proprietary medicines that are of distinct value. It will be the duty of the committee to make this known and the pleasure of the physician to obtain the information.

THE ONTARIO MEDICAL ASSOCIATION.

The attention of the profession throughout the province is again called to the coming meeting of the Ontario Medical Association, June 6th, 7th and 8th next. As was the case last year the sessions will be held in

the west lecture hall of the Medical Buildings, Queen's Park. The programme is being rapidly filled and anyone desirous of presenting a paper should inform the secretary at an early date.

The officially invited guests for the meeting are Drs. A. J. Ochsner and W. B. Pritchard.

Dr. Ochsner, surgeon to St. Augustine Hospital, Chicago, is he whose aggressive surgery and whose courtesy to many Canadians visiting his crowded clinic have made him so very popular on this side of the line. The names of Dr. Ochsner and his friend, Dr. Mayo, are, perhaps, more upon the lips of men studying the advances in surgical thought than those of any other two operating surgeons on the continent.

Dr. Pritchard, of the Post-Graduate College of New York city, has identified himself by his work as a neurologist. He likewise is well known to many in Ontario, his friends predicting for him a very warm reception here.

THE VALUE OF DIPHTHERIA ANTITOXIN.

We have much pleasure in quoting the following from a recent bulletin of the Chicago Board of Health:

"No child dies of diphtheria to whom 3,000 units of antitoxin are administered within the first forty-eight hours of the attack—repeated, of course, if necessary.

"That is to say, one of the most malignant diseases has become one of the least dangerous through the discovery of a specific. It may be confidently defined where there is the intelligence to insist on the employment of the remedy. The whole public ought to understand this, and to understand also that the conviction of the department is based upon an intimate knowledge of the record that has been made in the city since the use of antitoxin began.

"While the Department certainly has 'an intimate knowledge of the record,' and has, from time to time, given such record to the public, it may be given again with profit—since, in sanitary matters and in matters of preventive medicine, iteration and reiteration, 'line upon line, precept upon precept,' cannot too often be multiplied.

"Ten years ago the antitoxin treatment of diphtheria was begun by the Department. During the previous ten years ended December 31, 1894, there had been 13,566 deaths from diphtheria and croup reported to the Bureau of Vital Statistics—a yearly average of 1,356 and a proportion of 13.53 deaths in every 10,000 of the population.

"During the ten years ended December 31, 1904, there were only 8,129 such deaths reported—a yearly average of 812 and a proportion of less than 5 (4.88) on every 10,000 of the population.

"These figures show a reduction of 5,437 in the actual number of diphtheria-and-croup deaths since the Department began the antitoxin treatment. They show a relative reduction, in proportion to increased population, of nearly 64 per cent.—63.9. Which is to say that, if the ravages of diphtheria had not been checked by the use of antitoxin during the last decennium, there would have been 22,538 deaths from this former 'scourge of the nursery,' instead of the 8,129 that did actually occur—a saving of 14,409 lives."

One would think that such evidence as the above would prove convincing, and yet there are some who appear to be still unconvinced with regard to the life-saving power of diphtheria antitoxin.

At the meeting of the Ontario Medical Association last year, there was a lively discussion on the treatment of diphtheria. It was then stated by one or two of the speakers that antitoxin was not as potent for good as many claimed. The above report from the Board of Health for Chicago negatives such views effectively. We have noticed that the death rate from diphtheria in Ontario has gone as high as 12 per cent. This we think should not be the case; and we fear is due to the expense of the antitoxin placing it beyond the reach of some of the poorer patients. In such cases we think the municipality should supply it. We know of many instances where the doctor supplied it rather than see the patient die.

THE ONTARIO HOSPITAL ASSOCIATION.

We have had occasion in the past to mention this association favorably and to commend its objects to our readers. The hospitals of Ontario are doing an excellent work for the Province and merit much better treatment at the hands of the Provincial Government, the municipalities, and the wealthy than they have received in the past.

An influential deputation of the association waited upon the Government on April 12th and pressed for an increase in the Government grant towards the support of the hospitals. The grant is now, and has been for years, \$110,000. When this is divided up among those entitled to it, it yields only 17 cents per day. Municipal aid to patients never exceeds 50 cents per day, or a total of 67 cents. The deputation pointed out very clearly that the cost of maintenance of all patients throughout the Province was 89 cents per day. This leaves a loss of at least 20 cents per day.

It was shown that it would not be wise to raise the municipal charge, and that, therefore, the duty fell upon the Government to do more for this class of patients. The deputation asked that the Government grant be made 25 cents per day on those entitled to it. This would give the hos-

pital an income of 75 cents a day on the cheapest grade of patients. It was thought that on this amount the hospitals could carry these patients without entrenching too much on the other funds of the hospital and thereby crippling their efficiency.

The objects of the association are very worthy, and deserves careful consideration at the hands of the medical profession.

THE TREATMENT OF PAUPER INEBRIATES.

At the annual meeting of the Canadian Medical Association, held in Toronto on August 30th, 31st, and September 1st, 1899, Dr. James Thorburn, the chairman of the Committee on the Treatment of Inebriates, submitted the report, which reads as follows :

At the Quebec meeting of this association a paper by Dr. A. M. Roseburgh was read by the secretary on this subject. This gentleman has for years taken a deep interest in the reformation of inebriates, and about eighteen months ago was commissioned by the Prisoners' Aid Association of Canada to visit institutions and interview specialists, with a view of enabling him to formulate a plan for the economic treatment of pauper inebriates. After visiting eight special institutions and conferring with the best known specialists in Canada and the United States, he found that about thirty-four per cent. of those subjected to scientific treatment appear to be permanently relieved from their infirmity. This percentage, he is convinced, may be very materially increased by the adoption of a modification of the Massachusetts' Probation System—changing the environment of the patients and exercising judicious supervision subsequent to treatment. While he has for many years recommended reformatory treatment with prolonged detention for the more hopeless class of inebriates, he is convinced that, for the incipient drunkard and the more hopeful class, a few weeks' hospital treatment will be effective in a large percentage of cases, more especially if the case be followed by judicious management subsequent to treatment.

Since the paper referred to was read at Quebec, the matter has been considered by the Ontario Medical Association and the plan therein outlined was fully endorsed and also commended to the Ontario Government for adoption. We learn that influential members of the Ontario Government, to whom the scheme was submitted at an audience given by them to a committee of the Ontario Medical Association, expressed themselves as being very favorably impressed therewith, and that they were disposed to favor its adoption in Ontario.

The scheme endorsed by the Ontario Medical Association and recommended to the Ontario Government, briefly stated, is as follows :

(a) The appointment by the provincial government of an inspector of inebriate institutions. This inspector should be a qualified medical practitioner, who has made the medical treatment of inebriety a special study.

(b) The inspector should organize in the City of Toronto a hospital for the medical treatment of pauper inebriates of the more hopeful class, and in other cities of the Province an inebriate department in the existing general hospitals.

(c) The inspector should also arrange in connection with each institution, where inebriates are received and treated, an organization or agency for the adoption of the probation system, and giving a helping hand to the patients subsequent to treatment for inebriety.

(d) The inspector should provide for the adoption of a rational course of medical treatment for inebriates in accordance with the tenets of legitimate medicine only, to the exclusion of the use of any proprietary remedy.

Under the circumstances here cited, we beg leave to make the following recommendations :—

1. While we are of the opinion that for the successful treatment of confirmed drunkards, prolonged removal from temptation in a properly equipped reformatory is very desirable, if not absolutely necessary, we would nevertheless be disposed to endorse the plan herein outlined for the economic treatment of pauper inebriates of the more hopeful class, either in cottage hospitals or in a special department of general hospitals.

2. In case the plan of treatment of inebriates here referred to should be undertaken either by the Ontario Government or by any of the other provincial governments, we bespeak for it the cordial co-operation of every member of the medical profession who is in a position to favor this important undertaking.

Respectfully submitted,

(Sgd.) JAS. THORBURN, Toronto,
J. GEORGE ADAMI, Montreal,
W. S. MUIR, Halifax.

Dr. Thorburn moved the adoption of this report, seconded by Dr. McNeill (Charlottetown, P.E.I.) Carried.

We have much pleasure in calling the attention of medical practitioners to this important subject. It is to be hoped that something decided will be done at an early date.

THE RETIREMENT OF DR. CHARLES O'REILLY.

For twenty-nine years, Dr. O'Reilly has been the Medical Superintendent of the Toronto General Hospital. A few days ago he handed in his resignation, an action which was a great surprise to his many friends and acquaintances.

Dr. O'Reilly is a graduate of McGill University, where he received the degrees of M.D., C.M. After graduating he was appointed to take charge of the Hamilton Hospital, a position which he filled for a number of years. On resigning this position he was tendered a banquet and presented with a complete silver service and an address by the city council and a marble clock by the medical profession.

In 1876 he was appointed to the position of Medical Superintendent of the Toronto General Hospital. During these twenty-nine years there have been many changes and improvements. The capacity of the hospital has been greatly increased. The patients, nurses, house surgeons, and servants, now total some 500 persons. Since Dr. O'Reilly became the head of the Toronto General Hospital, over 100,000 patients have passed through its wards. The hospital has now a bed accommodation for 400 patients.

When he lived in Hamilton he was secretary-treasurer of the Medical Society and one of the surgeons to the 13th Battalion of Hamilton. In 1881, he was instrumental in having an ambulance presented to the city. In 1890 the honorary degrees of M.D., C.M., were conferred upon him by Trinity University. He has acted as examiner in clinical surgery for the Medical Council of Ontario for many years. He is vice-president of the Association of Hospital Medical Superintendents, and of the Ontario Hospital Association.

Thousands of medical practitioners all over the world, who at some time walked the General Hospital, will join with THE CANADA LANCET in wishing Dr. O'Reilly many happy years. *Detur aliquando otium quiesque.*

PERSONAL AND NEWS ITEMS.

Dr. A. P. Proctor is removing from Kamloops to Vancouver, where he will engage in practice. He is succeeded at Kamloops as C. P. R. doctor by Dr. Burris.

Dr. Thomas H. McCall, who was house surgeon at the Sarnia general hospital last year, was married on Wednesday, March 15th, to Miss Christina McAlpine, of Payne's Mills. Dr. and Mrs. McCall will be at

home after May 1st at Tilbury, where Dr. McCall is practising.

Dr. R. M. Simpson, of Winnipeg, Chairman of the Provincial Board of Health, has returned after an absence of some months in London, England, where he took a post-graduate course in diseases of women, spending much of his time visiting the various hospitals.

Dr. Geo. K. Grimmer has decided to remove with his wife and family back again to Scotland and will take passage in the steamer sailing from St. John early next week.

Dr. A. E. Bolton has decided to take up his residence in Vancouver, engaging in general practice at that city. Since settling in Victoria Dr. Bolton has won a host of friends, all of whom will deeply regret his intention. As a member of the board of school trustees and President of the Young Men's Christian Association, he has made his influence felt in the public life of the city.

Dr. J. James, of Melbourne, who has sold his practice, intends to locate at Edmonton, where he will open a private hospital. He expects Miss Brown, his sister-in-law, a trained nurse, to accompany him and assist in the work.

The marriage of Miss Isobel Mary Johnston, daughter of Mrs. James Johnston, to Dr. W. H. P. Hill, son of Rev. J. Edgar Hill, took place on Wednesday, April 19th, at the residence of the bride's mother.

Dr. Chown, of Winnipeg, performed an operation on Dr. Stevenson, of Moosomin, a short time ago. We are pleased to know that the doctor is recovering although rather slowly.

Dr. McGuigan, of Vancouver, has returned from Harrison, where he had been recuperating recently. He will continue his practice.

A quiet wedding was solemnized recently at St. Thomas' Church, when Miss Violet M. Paterson, youngest daughter of the late Capt. William Paterson, was married to Dr. Charles E. Treble, M.R.C.S., son of Mr. J. M. Treble, all of Toronto.

Dr. G. R. McDonagh spent two months in an enjoyable trip abroad.

Dr. Williams, of Lisle, has sold his practice to Dr. Evans, late of Uxbridge. Dr. Williams will take a post-graduate course before resuming practice.

Dr. G. W. Barber, of St. George, has sold his medical practice to Dr. T. Dunlop White, of Brantford. Dr. Barber has been in St. George for about eight years.

Dr. G. A. Richardson has purchased Dr. Herbert Galloway's house at 14 Bloor street east and expects to remove his office and residence early in May.

Dr. William Turner, formerly of the Montreal General Hospital, has taken his degrees as M.R.C.S. and L.R.C.P. at London, and is at present at Paris.

Dr. A. M. Rosebrugh has removed to 22 Shuter street, Toronto.

The medical faculty at Queen's is considering a proposal to lengthen the session so that medicine and arts can finish at the same time—in April. The proposed lengthening would suffice for the extra six weeks' session, which follows, to meet the requirements of the Ontario Medical Council. The new scheme may go into effect in 1906.

The many friends of Dr. Homer McLay will be glad to learn that he has decided to locate permanently in Aylmer.

Dr. T. B. Stevenson, formerly resident physician of Lakeside hospital, Toronto, and graduate of Trinity University, Toronto, and also of Toronto University, has located in Ponoka, in partnership with Dr. Campbell.

Dr. J. A. McNaughton, of Brussels, has decided to take a complete rest for a year.

The marriage of Miss Frances Charlotte Lister, daughter of the late Judge Lister, and Dr. John Herbert McConnell, of Dundas street, Toronto, took place on Wednesday, April 19th.

Dr. D. B. Bently, of Sarnia, was successfully operated upon for an attack of appendicitis a few weeks ago. The doctor has made a good recovery.

Dr. Robert Craik, formerly dean of McGill Medical Faculty, was seriously ill lately, but is getting better.

The marriage of Dr. Douglas Gray, of Sudbury, and Miss Lillian Gordon, of Pembroke, took place 10th April.

Dr. William E. Bessey died in St. Mary's Hospital, Grand Rapids, Mich., a city charge, after having for almost sixty years practised medicine-surgery. William E. Bessey, born near Montreal, graduated from McGill University medical department when he was 21 years of age, and practised in Montreal for many years, and was in Toronto for sometime.

Dr. William Osler was in Montreal a couple of weeks ago where he was dined. He gave an address to the students on "The Student in and Out of College." He made a passing remark on the risk of trying to be humorous. He received a great ovation from the students of the college where he spent so many years and for which he did so much.

Dr. Duncan Anderson, of Toronto, has completely recovered from the operation for appendicitis which had to be performed upon him. His attack was one of extreme acuteness.

Dr. Harold Ward, of Kingston, has gone for a five months' trip to Europe.

Dr. W. Gunn, of Clinton, while in Toronto in consultation with Dr. Caven over a Clinton patient, was taken suddenly and dangerously ill. His many friends will be glad to learn of his recovery.

Dr. W. Warner Jones, of Mount Forest, who, in 1904 passed the examination for the Fellowship of R.C.S. England, has recently been appointed Senior House Surgeon at St. Peter's Hospital, London, Eng. For the past six months he has been House Surgeon in the West London, Hospital. His many friends will be pleased to learn of his success.

Dr. G. A. Peters, of Toronto, has been compelled through ill health to take a lengthy rest. We hope to hear of his perfect recovery.

Dr. Brown, the C. N. R. physician, at Battleford, was almost drowned in the Saskatchewan, slipping through the ice, but was rescued by a companion.

Dr. and Mrs. Ainslie P. Ardagh, of Orillia, sailed lately for England. They will be absent for six months or more, Dr. Ardagh taking a post-graduate course in London, specializing for the eye, ear, nose and throat.

The many friends of Dr. W. A. Groves, of Fergus, will be pleased to learn that he has been appointed assistant surgeon on the Baltic, one of the largest ocean steamers of the White Star line, plying between New York and Liverpool. He paid a flying visit to his father before leaving for New York, to take his vessel.

The following Canadian graduates were present at a dinner in London, Eng., given by Dr. Donald Armour, F.R.C.S.E., in honor of ex-members of Toronto General Hospital house staff. Dr. George Badgerow, E. D. Carder, A. C. Hendrick, W. J. Mallock, George W. Ross, G. A. Schmidt, A. B. Wright, S. H. Wertman, Colin Campbell, J. M. Cochrane, H. Lowry, J. R. McCollum, A. T. Stanton, P. W. Saunders, T. P. Weir. In welcoming his guests, Dr. Armour spoke of the happy days they had spent as house surgeons in the Toronto General Hospital. He referred in high terms to the hospital and Dr. O'Reilly. All regretted the doctor was not present in person.

Dr. A. H. Singleton, recently a house surgeon in the Kingston General Hospital, has secured the degree of L.R.C.P., and S., from Edinburgh University, whither he went in February to write upon the examinations. Dr. Singleton will be back shortly. His home is at Newboro. A year ago he graduated at Queen's medical college.

Dr. Cranson de St. Remy, of Kingston, died in St. Vincent Hospital, New York, on 7th April, after several weeks' illness. He had been a house surgeon for the past year in the Manhattan Eye and Ear Hospital, but was stricken down with a former ailment, heart trouble. Deceased was a son of Peter de St. Remy, now of Buffalo, N.Y. The remains were brought to Kingston for interment.

Dr. W. H. B. Aikins and Mrs. Aikins of Toronto, who have been touring Europe sailed from Bremen for New York on the 25th April.

The engagement is announced of Miss Minnie Darling, only daughter of Mr. and Mrs. Richard Darling, 114 Robert Street, to Dr. T. H. Bell, F.T.M.C., M.R.C.S., only son of Mr. F. J. Bell, Toronto. The marriage will take place in June.

The engagement is announced of Miss Margaret Sloane, elder daughter of Mrs. William Sloane, Rusholme Road, to Dr. D. W. McPherson, elder son of Mr. and Mrs. James McPherson, Bathurst Street, Toronto.

Dr. Williams, of Lisle, has sold his practice to Dr. Evans, late of Uxbridge. Dr. Williams will take a post-graduate course before resuming practice.

The marriages of Miss Frances Charlotte Lister, daughter of the late Judge Lister, and Dr. John Herbert McConnell, both of Toronto, took place April 19th.

Dr. Aylesworth, of Bath, has made arrangements to practice medicine at Roseneath. He will occupy Dr. Lapp's old office.

OBITUARY.

THOMAS H. MEIKLE, M.D., L.R.C.P., ED.

Word has been received of the death of Dr. Thomas Hamilton Meikle, which occurred at his home in Emsworth, Hants, England, on the 21st of March. Dr. Meikle was the eldest son of Rev. Mr. and Mrs. Meikle, formerly of Oakville, and latterly of Toronto. He graduated from the Toronto School of Medicine in 1880, taking his Edinburgh degree two years later, and entered the British Navy the next year, from which he retired with rank of Fleet-Surgeon after twenty years' service. He was married in 1901 to Miss Jessie Lewis, of Portsmouth, England, who survives him.

Dr. Meikle had many friends in Canada, who will learn of his death with deep regret. He was a brother of W. B. Meikle, of Omaha, Neb., and a cousin of Mrs. James Warnock, of Galt, and the late Mrs. C. D. Massey, of Toronto. Few of the class of 1880 were better liked than the late Dr. Meikle. In the truest sense of the words, "He was a good fellow."

DAVID THOMPSON, M. D.

His many friends regretted to learn of the death of Dr. David Thompson, which occurred 20th February, at his residence, 5 Howewood avenue, Hamilton, after an illness of many months. The deceased was a son of the late David Thompson, member for Haldimand in the Dominion Parliament, and grandson of David Thompson, M.P., the first member for that county. Col. Andrew T. Thompson, his brother, represented Haldimand during the last parliament. Dr. Thompson was borne 41 years ago at Ruthven park, the family residence on the Grand River. He was educated at Upper Canada College, and took a medical course at Toronto University, and completed his studies at Edinburgh. He then lived and practised his profession at Cayuga until seven years ago, when he moved to Hamilton, where he had formed a large practice. While at Cayuga the deceased acted as reeve for two years, and after coming to Hamilton he was a member of the city council for two years. Dr. Thompson was very popular with all who knew him, and he will be greatly missed. He is survived by a widow and four children.

JOHN A. NELLES, M. D.

Dr. John A. Nelles died suddenly March 25th, at his home in London. He was 78 years of age, a prominent member of First Methodist Church, and vice-president of the London Loan Company. Dr. Nelles is survived by three daughters, who reside at home, and several sons. Two of the latter are in business in Montreal, and another is connected with the Molsons Bank. Dr. H. H. Nelles of London is a brother, and the late Principle Nelles, of Victoria University, Toronto, was also a brother.

PIERRE CHAUVEAU, M. D.

Dr. Pierre Chauveau, Quebec City, son of Mr. Pierre Chauveau, of the Sheriff's office, Montreal, died 19th March, at Quebec, after a brief illness. He was a grandson of the late Hon. P. J. O. Chauveau, who was premier of the first Quebec government and subsequently became Speaker of the Senate.

JOHN HERALD, M. A., M. D.

Dr. John Herald, of Kingston, died in the General Hospital there, 12th April. He was admitted to the hospital three days before his death and an operation was performed.

John Herald, M.A., M.D., was professor of clinical medicine and dermatology in Queen's University, and for several years was Registrar of the Medical School. He was a man of marked executive ability, a good lecturer, popular with the student body and had a large general practice of medicine in Kingston. He was 49 years of age. He was an ex-Mayor of Kingston. Interment took place at Dundas, his old home.

Dr. Herald was born in Aberdeen, Scotland, in 1855, and was the son of the late Rev. James Herald, Presbyterian minister. He came to Canada when comparatively young, and, entering Queen's University, he graduated with honors in 1876, and received the degree of M.A. in 1880. In 1884 he graduated in medicine from Queen's. He was a member of several fraternal orders, and was Past High Chief Ranger of the Independent Order of Foresters. His wife, formerly Miss Grafton, of Dundas, Ont., survives him.

W. H. JOHNSTON, M.D.

Dr. Johnston, of Fergus, one of the most prominent physicians of Wellington county, died 18th April, at the residence of his brother, Captain Archie Johnston, in Eramosa, after a four months' illness. He had an extensive practice, and was very successful. He took a most active part in the volunteers, in which he held the office of lieutenant-colonel surgeon. He was recently president of the Centre Wellington Agricultural Society, and was this year president of the Fergus Horticultural Society, for twenty years secretary of the public library, reeve during 1901 and 1902, county commissioner last year, and coroner of Wellington county. His funeral was a military one, leaving Fergus for the Johnston cemetery, Eramosa.

BOOK REVIEWS.

SEXUAL SELECTION IN MAN.

Studies in the Psychology of Sex—Sexual Selection in Man. I. Touch. II. Smell. III. Hearing. IV. Vision. By Havelock Ellis. 6 3-8 x 8 7-8 inches. Page XII-270. Extra Cloth, \$2.00, net. Sold only by subscription to physicians, lawyers, and scientists. F. A. Davis Company, publishers. 1914-16 Cherry Street, Philadelphia.

Havelock Ellis has been a close student of these subjects for many years. His writings have done much to place this subject upon a scientific basis. There is much in this subject that is yet in a nebulous state. The author dissents from the views put forward years ago by Darwin. The

author deserves much credit for attempting to place the evolution of the sexual instinct, its perversion and the diseases which arise in this way on a proper footing. His book is well worth reading.

HOLLIS' EPITOME OF MEDICAL DIAGNOSIS.

A Manual for Students and Physicians. By Austin W. Hollis, M.D., attending physician to St. Luke's Hospital; to the New York Dispensary, etc. In one 12mo volume of 319 pages, with 13 illustrations. Cloth, \$1.00 net. Lea Brothers & Co., publishers, Philadelphia and New York, 1905.

As each volume of *Lea's Series of Medical Epitomes* appears, the conviction is strengthened that Authors, Editor and Publishers are using their combined efforts to place before the medical world a set of compendious manuals to which the word BEST exactly applies. For the student preparing for examinations, or for the physician who wishes a handy volume to slip into his pocket or under the cushion of his carriage seat, so that at odd moments he may refresh his memory on forgotten details or post himself on the most recent knowledge on any medical subject the volumes of this series have proved to be very helpful.

Dr. Hollis' volume on Medical Diagnosis, just published, is the fifteenth of the series. It naturally does not claim originality, but it embodies an earnest effort to give a clear, accurate, compendious covering of the essentials of its subject, presented with a due sense of the relative importance of its various branches.

Diseases and abnormal conditions are taken up in regular sequence, and physical and clinical signs and symptoms are clearly pointed out with full explanations of their significance.

In addition to physical methods, the author gives directions for laboratory investigations, blood tests, bacteriological and chemical examinations, etc., and as one goes carefully through the book the wonder grows at the enormous amount of clear-cut, modern, well-arranged information which has been compressed between its covers.

Illustrations are used throughout the volume wherever the understanding can be better helped by the combination of text and pictures, and the price of the volume (\$1.00), based upon the certainty of a very wide usage, is low enough for every student's purse.

THE URINE AND FECES.

A practical Manual on the Urine and Feces in Diagnosis. By Otto Hensel, Ph. G., M.D., bacteriologist to the German Hospital, New York, and Richard Weil, A.M., M.D., pathologist to the German Hospital, New York, in collaboration with Smith Ely Jelliffe, M.D., Ph.D., Instructor in Pharmacology and Therapeutics, Columbia University; Visiting Neurologist, City

Hospital, New York. In one octavo volume of 334 pages, illustrated with 116 engravings and 10 colored plates. Cloth, \$2.75, net. Lea Brothers & Co., publishers, New York and Philadelphia, 1905.

Although there are a number of large and exhaustive treatises on clinical and laboratory methods of diagnosis, it is believed that this is the first laboratory methods of diagnosis, it is believed that this is the first compact, convenient and practical hand-book on the subject. It has been the aim of the authors to supply a trustworthy guide arranged for ready use, and complete enough for the actual daily needs of the working practitioner.

With the rapid growth of the use of precise methods in diagnosis the value of a manual of this kind becomes more and more evident. The authors, from their large hospital experience, are peculiarly fitted to furnish exactly the information that is most valuable, and this volume will prove an indispensable assistant to every progressive physician.

A TEXT BOOK OF THE PRACTICE OF MEDICINE.

For Students and Practitioners. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium and of the Medical Society of London. Author of *A Text-Book of Practical Therapeutics*; *A Text-Book of Practical Diagnosis*, etc. In one very handsome octavo volume of 1120 pages, with 129 engravings and 10 full-page plates in colors and monochrome. Cloth, \$5.00, net; leather, \$6.00, net; half morocco, \$6.50, net. Lea Brothers & Co., Philadelphia and New York, 1905.

As the student of to-day is the physician of the future, and as the physician must always be a student, a single volume can be conceived as answering the requirements both of a text-book and work of reference. This volume embodies the experience of more than twenty years of active hospital and private practice, during which time the author has been constantly teaching Clinical Medicine and Therapeutics. Dr. Hare possesses to an unrivalled degree the ability to grasp the essence of a subject and to present it clearly. He also understands how to select just those points concerning which the practitioner is likely to seek for information. These characteristics are notable in his previous works, especially in the *Practical Diagnosis* and *Practical Therapeutics*. Five large editions of the former in nine years, and ten still larger editions of the latter in fifteen years, testify to the appreciation which has been bestowed on them wherever English is read. The author's long training has enabled him to appreciate and overcome the student's difficulties, and his equal experience in practice has qualified him with ripened judgment to solve the everyday perplexities of the physician. Throughout the work the author has dealt with medicine as a practical science, and has given prominence to those aspects which bear directly on human needs. The sec-

tions on diagnosis and treatment have accordingly been developed with special fulness and detail, the therapeutical recommendations being given in such a way that they may be readily applied. Illustrations and plates have been introduced wherever an important point could be made clearer than by verbal description alone. This new work by an author so well equipped at every point is assured of a warm welcome as the leading Practice of Medicine for all classes of readers.

ELEMENTARY MICROSCOPY.

A Handbook for Beginners. By F. Shillington Scales, F.R.M.S., London; Baillière, Tindall and Cox; Toronto, J. A. Carveth & Co., and Chandler & Massey. Price 3s., net, 1905.

This book deals with the microscope, the mounting of specimens, and their examination. It is a first class little book for those who have occasion to use a microscope. There is nothing pertaining to the mechanical part of microscopy which is omitted. The book is well illustrated, bound and printed. The varieties of microscopes, lenses, microtomes and their care and the method of manipulating them are explained fully.

SURFACE ANATOMY.

By T. Gillman Moorhead, M.D., Dub., M.R.C.P.I., Physician Royal City of Dublin Hospital. Late Chief Demonstrator of Anatomy and Joint Lecturer in Applied Anatomy, T. C. D.; Lecturer in Medicine Royal Service School, T.C.D. London: Baillière, Tindall & Co. 1905. Price 4s. 6d., net.

This is an excellent book of its kind. Most medical men are familiar with such books as Treves' Surgical Anatomy, Holden's Landmarks, Bellamy's Surgical Anatomy, etc. The present book is written in good style and well illustrated. It is really an attractive little volume. The information is reliable and of such a character as to prove very useful to the student, the operating surgeon, and the general practitioner.

EYE, EAR, NOSE, AND THROAT NURSING.

By A. Edward Davis, A.M., M.D., Professor of Diseases of the Eye in the New York Post-Graduate Medical School and Hospital, and Beaman Douglass, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital. With 32 illustrations. Pages XVI-318. Size, 5 1-2 by 7 7-8 inches. Extra cloth. Price, \$1.25, net. F. A. Davis Co., publishers, 1914-16 Cherry Street, Philadelphia.

This little book has been written primarily for the use of nurses, students and general practitioners. It contains a good deal of very useful information on the more common diseases of the eye, ear, nose and throat, and is well calculated to be of distinct usefulness to those for

whom it is specially written. The book is got up in a very neat form. Excellent instructions are given for the preparation of patients for the various operations and how to perform the more common ones. The treatment of many diseases is given in a careful manner.

MECHANICAL VIBRATION AND ITS THERAPEUTIC APPLICATION.

By M. L. H. Arnold Snow, M.D., Professor of Mechanical Vibration Therapy in the New York School of Physical Therapeutics; Associate Editor of the Journal of Advanced Therapeutics; late Assistant in Electro-Therapeutics and Diseases of the Nervous System, in the New York Post-Graduate Medical School, etc. Published by the Scientific Authors' Publishing Co., 465 Lexington Ave., New York. Price \$2.50, net.

Dr. Snow has acquired considerable note as a writer upon the above subject. Mechanical vibration or vibra-massage has made rapid development during the past few years. The author traces the history of massage, the movement treatment, (and mechanical vibration from the earliest mention. A full account is given of all the instruments in use and their mode of application. The book is well got up and fully illustrated. A detailed account is then given of the effect of vibration on the different systems and the application of this method to the treatment of disease. The author claims the vibration is of wide applicability in the treatment of disease, and, like the X-rays and the light treatment, is bound to make for itself a distinct place in modern therapeutics. Many eminent names have at some time or other endorsed the principle of this form of treatment, such as Seguin, Graham, Playfair, Weir, Mitchell, Kellogg, etc. We are impressed with the importance of the subject and can recommend this book to our readers.

THE CONJUNCTIVA IN HEALTH AND DISEASE.

Being a Record of Some Research Work by N. Bishop Harman, M.A., M.B. Contab., F.R.C.S., Eng. Ophthalmic Surgeon to the Belgrave Hospital for Children; Chief Clinical Assistant, the Royal London Ophthalmic Hospital, Moorfields; Senior Ophthalmic Assistant, the Middlesex Hospital, etc., etc. London: Baillière, Tindall & Cox; 1905; price 10s. 6d.

This is a particularly attractive book. It is got up in the finest possible style, as to paper, printing, illustrating and binding. The book contains much interesting information upon the history of the subject, the anatomy of the conjunctiva, the causes of blindness, bacteriology, the varieties of conjunctiva, and the treatment of these. Conjunctivitis in its several forms constitute a very important part of a doctor's duties to his patients. The classification adopted is that of simple conjunctivitis,

conjunctivitis due to disease in lochrymal sac, blepharitis, angular conjunctivitis, purulent, membranous, tubercular, trachomatous, phlyctenular, and spring catarrh. The treatment is full and up-to-date.

DISEASES OF CHILDREN.

The British Journal of Diseases of Children, edited by George Carpenter, M.D. Vol. I. London: Adlard & Son.

This is the numbers of the first year of publication of this excellent journal bound in a neat volume. The editor has done well in his first year and we hope he may be able to keep up the high standard he has set for himself. There is no special journal takes a higher place than this one devoted to the diseases of children. We wish the editor and publishers every success. The price is 15s. bound and 1s. per monthly number.

VENEREAL DISEASES.

What Venereal Diseases mean and How to prevent them. Five lectures given at the University of Copenhagen by Professor Erik Pontoppidan, Chief Physician to the Loch Hospital, Copenhagen. London: John Bale, Sons & Danielsson. 2s., net.

The whole subject of the venereal diseases are discussed in a very thorough manner. This brochure points out the vast amount of harm that is done by these diseases. The author goes into the question of the prevention and throws out some excellent suggestions on the subject. He admits that the plan of "abolition" has completely failed, and that "regulation" is the only way by which these diseases can be checked.

THE VERMIFORM APPENDIX AND ITS DISEASES.

By Howard A. Kelly, A.B., M.D., Professor of Gynecology in the Johns Hopkins University, Baltimore, and E. Hurdon, M.D., Assistant in Gynecology in the Johns Hopkins University, with 399 original illustrations, some in colors, and 3 lithographic plates. Philadelphia and London: W. B. Saunders; Toronto: J. A. Carveth & Co, 344 Yonge St., Toronto; 1905. Price cloth, \$10, net; sheep or half morocco, \$11, net.

Howard A. Kelly is a surgeon of first rank, and it has been known for some time that he was engaged on a *magnum opus* on the appendix. That work is now before the medical profession. That the appendix and its diseases are important subjects no one will doubt. It has claimed the attention in a very special manner of such high authorities as Sir William Macewen, Sir Frederick Treves, Professor Deaver, Professor Ochsner, Barrett Lockwood, and Drs. Battle and Cornet. On the heels of the writings by these men comes along this

work by Professor Kelly. We wish to say at once that this is a great work. When we bear in mind that appendicitis is by far the most important of the diseases of the abdomen; indeed, is one of the most important of the acute diseases to which man is subject, we can readily understand why these writers have given so much attention to this question. This work enters fully into the history of the disease, and takes up the anatomy and physiology of the appendix in a very clear and satisfactory manner. The bacteriology of appendicitis receives, as it ought, full consideration. The pathology and etiology of this malady are gone into carefully. The portion of the book devoted to symptomatology and diagnosis is particularly good; and this is very important. One turns, however, to the surgical treatment of appendicitis. Dr. Kelly states that: "Ideal time for operation in acute appendicitis is within the first few hours, and not later than the first twenty-four." The advantages of this course are: "It is safest, the operation is more easily done, the patient is spared days of suffering, the liability to recurrent attacks is obviated, and an early operation obviated the risk of hernia." These are weighty reasons. American and French surgeons take this view, while German and British surgeons are more conservative and lean towards delay with the view of avoiding operative treatment as frequently as possible. The details of the operation are given with great minutiae. There is nothing about the whole subject which one does not find discussed in this work. We congratulate Professor Kelly and the publishers on the results of their efforts. Nor must we forget the artists, for the illustrations are superb. This work complies in every detail with the requirements laid down long ago by Morgagni that a book must be the outcome of many dissections and clinical observations, collected, compared and collated.

AN ATLAS OF DERMATOLOGY.

A work showing the appearances clinical and microscopical, normal and abnormal, of conditions of the skin. By Morgan Dockrell, M.A., M.D., Senior Physician and Chesterfield Lecturer on Dermatology to St. John's Hospital for Diseases of the Skin. London, New York and Bombay: Longmans, Green, and Company; 1905; price, 50s. net.

This is a work specially intended to aid in the diagnosis of skin diseases. There is nothing said on the subject of treatment. The letter press description accompanying each plate is divided into remarks on the clinical and microscopical features of the disease portrayed in the plates. The plates, of which there are sixty, are beautifully executed. They give the conditions in the colors characteristic of the diseases. The work is got up in excellent form, the paper being of very fine quality, the printing very clear, and the binding substantial. The letter press and

the plate face each other, making the study of each plate easy. This work will prove a great help to its possessor in the making of a diagnosis of most of the forms of skin diseases. We can speak in very high praise of Morgan Dockrell's new atlas of skin diseases.

SAUNDERS' AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1905.

A yearly digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs, and textbooks of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of George M. Gould, A.M., M.D., in two volumes. Volume I, including General Medicine; Volume II, General Surgery. Two octavos of about 700 pages each, fully illustrated. Philadelphia and London: W. B. Saunders & Co., 1905. Per volume: Cloth, \$3.00 net; half morocco, \$3.75 net. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

The 1905 issue of Saunders' American Year-Book of Medicine and Surgery fully maintains the pre-eminent position which it long ago established. Dr. Gould, the editor, has associated with him a staff of men of greatest ability, shown in the conscientious thoroughness with which each article is prepared. Here the practitioner has placed before him, and at a very moderate price, the cream of all the medical literature published during the past year, and in such a form that it is readily digestible. As a compendium of medical and surgical progress, it will prove invaluable; for the practitioner anxious to keep abreast of the advances in the subjects treated, it will be of the utmost assistance. The text, as usual contains a number of illustrations of practical value; there are also nine insert plates of much excellence.

ESSENTIALS OF THE PRACTICE OF MEDICINE.

Prepared especially for students of medicine. By William R. Williams, M.D., formerly Instructor in Medicine and Lecturer in Hygiene, Cornell University; Tutor in Therapeutics, Columbia University (College of Physicians and Surgeons), New York. 12mo of 461 pages. Philadelphia and London: W. B. Saunders & Co., 1905. Double number. Cloth, \$1.75 net. J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

In this new volume in Saunders' Question-Compend Series the student is provided with a book of the utmost practical value. Throughout the work special stress has been laid on the more common aspects of the various diseases, emphasizing the contrasting points in similar conditions, so as to render differential diagnosis as easy as possible. Symptomatology and treatment have likewise been adequately, although concisely, considered. In fact, this little work is the best we have seen, and for students preparing for examination it will be a most welcome

and trusty aid. It contains a vast amount of practical, essential information in the least possible space.

THE OPHTHALMIC YEAR-BOOK.

A Digest of Literature of Ophthalmology with Index of Publications for the year 1903. By Edward Jackson, A.M., M.D., Emeritus, Professor of Diseases of the Eye in the Philadelphia Polyclinic, etc., etc., with 45 illustrations. The Herrick Book and Stationery Company, Denver, Col., 1904.

This is a carefully prepared digest of the literature on diseases of the eye for the year. The author covers the ground with ability and credit. The various diseases of the eye are taken up in order and the best of the year's progress given the reader.

PRACTICAL PEDIATRICS.

A Manual of the Medical and Surgical Diseases of Infancy and Childhood. By Dr. E. Graetzer, editor of the "Centralblatt Fur Kinderheilkunde" and the "Excerpta Medica." Authorized translation, with numerous Additions and Notes, by Herman B. Sheffield, M.D., Instructor in Diseases of Children, and Attending Pediatric (O.P.D.) New York Post-Graduate Medical School and Hospital; Visiting Pediatric to the Metropolitan Hospital and Dispensary, etc. Pages XII-544. Crown Octavo. Flexible cloth, round corners. Price \$3.00 net. F. A. Davis Company, publishers, 1914-16 Cherry Street, Philadelphia.

This is a trustworthy book on a very important department of every general practitioners' daily duties. The successful management of the medical and surgical diseases of childhood is very essential to success. We can very confidently recommend this work. Dr. Sheffield has given the reader a good translation of the German edition. The book is got up in attractive form. The paper and typography are all that anyone could desire.

MALFORMATIONS OF THE GENITAL ORGANS OF WOMEN.

By Ch. Debierre, Professor of Anatomy in the Medical Faculty at Lille. With 85 illustrations. Translated by J. Henry C. Simes, M.D., Emeritus Professor of Genito-Urinary and Venereal Diseases in the Philadelphia Polyclinic. Philadelphia: P. Blakistons Son & Co., 1905; price \$1.50, net.

This is a very pretty little book. In this respect the publishers merit all possible praise. The binding, paper, typography, and illustrations would certainly please the most hypercritical. The author, on his part.

has given the profession a most interesting book. His work falls into three parts : The anatomy, the development. and the malformations of the female genital organs. It is extremely interesting to note how the author traces the perversions of development that cause the malformations he describes. The book will well repay a careful perusal and an often time return to it for reference.

WELLCOME RESEARCH LABORATORIES.

First Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. By the Director, Andrew Balfour, M.D., B.Sc., M.R.C.P., Edin., D.P.H. Camb., Fellow of the Royal Institute of Public Health, member of the Epidemiological Society. Medical Officer of Health, Khartoum, and Sanitary Adviser to the Soudan Civil Medical Department. Department of Education, Soudan Government, Khartoum, 1904.

Mr. Henry S. Wellcome performed a great service to the British possessions in Africa and through these to the whole empire when he equipped the Research Laboratories of the Gordon Memorial College at Khartoum. Such facts are few and, therefore, very precious. The purposes of these laboratories are to promote technical education, to study tropical disorders, to examine foods, to detect poisons, to make assays, etc. The report before us is a splendid one and reflects much credit upon the Director, Dr. Balfour, and those concerned in its publication. After an introduction setting out the foundation of the laboratories, there is a full and instructive section on the mosquito. The *Culex fatigans* is shown to be a filaria carrier, *Pyrethrophorus costalis* conveys malaria, while *Stegomyia fasciata* is responsible for yellow fever. There are some other forms of mosquito that convey disease. Much has been done to break up the breeding places of the mosquito. Other varieties of disease producing flies are described and beautifully illustrated. There is then a good account given of the work on malaria, filariasis, trypanosomiasis, haematuria, etc., etc. Upon the whole the Report contains a great deal of very interesting matter.

THE EYE, MIND, ENERGY AND MATTER.

By Chalmers Prentice, M.D., Chicago, Ill. Published by the Author, 1905.

The more one reads this book the less able he feels himself to review. It is not suitable for the lay reader and it is not likely to be any

use to the doctor. Let us quote one sentence. "In the union of health adjuncts, and the absence of pessimism, there is no such thing as incurable disease." We have done.

CONSERVATIVE GYNECOLOGY AND ELECTRO-THERAPEUTICS.

A Practical Treatise on the Diseases of Women and their Treatment by Electricity. By G. Betton Massey, M.D., attending surgeon to the American Oncologic Hospital, Philadelphia; Fellow and Ex-President of the American Electro-Therapeutic Association; Member of the Société Française d'Electro-Thérapie, American Medical Association, etc. Fourth edition, revised, rewritten and greatly enlarged. Illustrated with Twelve (12) original, full-page chromo-lithographic plates; twelve (12) full-page half-tone plates of photographs taken from nature, and 157 half-tone and photo-engravings in the text. Pages XVI-468. Royal octavo. Extra cloth, beveled edges. Price, \$4.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The first edition appeared in 1889. Since then the author has acquired much new experience and has added largely to the importance and value of the book. The forms of current, the mode of using them, and the diseases for which they may be employed, are all set out with much care. The author deserves commendation for this valuable contribution to medical literature. The publishers have spared no effort to do their part well.

INTERNATIONAL CLINICS.

A quarterly of Illustrated Clinical Lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynaecology, etc. Edited by A. O. J. Kelly, A.M., M.D., Philadelphia, with the collaboration of many eminent physicians, surgeons and specialists. Philadelphia and London: J. B. Lippincott Company; Canadian agent: Charles Roberts, Montreal. Price, \$2.00, Vol. 1, 1905.

This is one of the very best volumes that has appeared in this splendid series. To say this is to say much; and, yet, not too much. There are three articles on treatment, five on medicine, five on surgery, three on neurology, one on obstetrics, and a careful summary of the progress made in 1904 in the various branches of medical science. The book contains a number of excellent illustrations. The editor and publishers are both entitled to much praise for their efforts to keep this publication up to such a high standard. Throughout the book are to be found the record of some very interesting cases. Upon the whole we can speak of this series of books in terms of high praise.

SATTERTHWAITE ON THE HEART.

Diseases of the Heart and Aorta by Thomas E. Satterthwaite, M.D., Professor of Medicine in the New York Post-Graduate Medical School; Consulting Physician to the Post-Graduate, Orthopaedic and Babies' Hospitals; President of the Medical Association of the Greater City of New York. Publishers: E. R. Pelton, 19 East 16th Street, New York City.

This is a book of 304 pages, and consequently not too large for the busiest to read and study. The usual diseases of the heart are carefully studied and sound teachings laid down regarding it. The portions of the book dealing with the diagnosis of the various forms of cardiac diseases is good, and furnish in small compass much reliable information. The rules for treatment are laid down in a very explicit manner. We are glad to notice that the author belongs to the class who think that something can be done for persons suffering from heart disease. He is not too pessimistic. A number of the chapters had appeared elsewhere and are now gathered together with a good deal of new matter. A large number of illustrative cases are recorded.

MISCECLLANEOUS.

THE TREATMENT OF MENSTRUAL DISORDERS WITH SPECIAL
REFERENCE TO CASES IN WOMEN SUFFERING
FROM MENTAL DISEASES.

By GEORGE S. WALKER, M. D., Staunton, Va.

First Assistant Physician in Charge of Female Department, Western State Hospital,
Staunton, Va., etc.

The connection between disorders of menstruation and disorders of the brain and nervous system has long been an established fact. The dependence of the psychic functions of the menopause upon mentality, are all subjects that have received the attention of clinicians for many years. It is a well-known fact, correlated to the peculiar connection between the mind and the sexual apparatus, that amenorrhea is not infrequently met with in the insane. Thus, Sutton and Giles, in their work on the Diseases of Women, point out that "If in such a case menstruation comes on again the mental condition often improves." The problem as to how to treat insanity is one of the most difficult in therapeutics; and in the modern conception of this treatment all agents that tend directly or indirectly to further the equilibrium of the mental functions have a legitimate place.

One of the most difficult phases of this problem is the treatment of the menstrual disorders in insane women, and the importance of correcting any such disorders, in this class of patients is realized by all who are aware of the fact noted by numerous clinicians, that the improvement of the menstrual function leads to a marked amelioration in the mentality of these patients in very many instances.

In an institution like the hospital with which I am connected we naturally come face to face frequently enough with the question of treating the amenorrhea that is noted as an accompaniment of mental disease and for a long time I have been experimenting with various therapeutic agents recommended for the treatment of menstrual disorders without obtaining perfect satisfaction from any, until I tried the method of treatment which I am about to describe.

What I was looking for was a safe and efficient emmenagogue, which gave positive results in cases of amenorrhea, dysmenorrhea, and suppressed menstruation, without either exciting or depressing the patient, without causing any disturbances on the part of the digestive tract, or the urinary tract, such as are met with in the use of most of the remedies classed as emmenagogues.

I knew that Apiol, the active principle of *Apium petroselinum*, Linne (Parsley), was a substance that had been long known to possess marked emmenagogue properties, but that had not been used extensively in this country on account of certain unpleasant after-effects connected with its administration. On investigation, I found that Apiol was first isolated by Joret and Homolle in 1855, and was at first recommended for malaria, as a substitute for that specific of specifics—quinine. Later its emmenagogue virtues became known, but it found far less favor in this country than in France, the American physicians being especially prone to reject any remedy that has disagreeable after-effects. Apiol seemed to me the ideal emmenagogue, and I was even tempted to try it, administering it in some way as to neutralize its irritant action, when I came across a statement in an article on the subject, to the effect that the Apiol of the market, no matter where purchased, was full of a series of impurities, and that the bad after-effects of this drug were due to these impure elements.

The ordinary Apiol of commerce, it seemed, was simply a mixture of impure principles obtained from parsley by extraction. The question was, therefore, to obtain such a preparation of Apiol that eliminates the impurities that do the harmful work of the ordinary preparation. A number of chemists, in various countries have tried to purify Apiol with varying success, but finally, within the last few years a pure product was obtained. It seems that the preparation which contains the purest product obtainable, which was prepared by the new process mentioned, is a pharmaceutical compound known as Ergo-Apiol (Smith). Seeking, as I said,

preparation of Apiol which would give satisfactory results in amenorrhea, dysmenorrhea, and suppressed menstruation, especially in the insane, and that would not produce any undesirable after-effects, I determined to try Ergo-Apiol (Smith), a liquid substance dispensed in gelatin capsules, which contains the pure Apiol described above, and in addition to a combination of emmenagogues that immediately appealed to me as calculated to enhance the efficiency of the whole remedy, namely ergot of rye, oil of savin and aloin.

I selected a series of cases in the hospital, each of which was characterized by a more or less pronounced menstrual disorder of some standing, and administered no other medication for the treatment of the disordered menstruation than Ergo-Apiol. I cite, in illustration, three cases in which the remedy in question was employed. They are only examples of the experience I had with it.

Case I.—Miss V. F. Aged twenty-one years. Was admitted June 1901. She said that she had not menstruated for nearly a year, and attributed her suffering in body and mind to this fact. She was despondent, and on the verge of committing suicide. The reflex effects of the uterine disturbance were also manifested by the derangement of function in nearly all the organs. There was entire loss of appetite and a practical cessation of digestion, accompanied by pain after eating. In October, 1901, I began to give her two capsules of Ergo-Apiol (Smith) three times a day until after her expected periods, without any effect. During the month of November I gave her two capsules three times a day, and continued the treatment until December 12th, 1901, when her menstruation returned in a perfectly normal manner. No unpleasant after-effects whatever were noted at any time during this treatment. She improved both mentally and physically during the time of taking this emmenagogue, and her condition was so remarkably ameliorated that she was discharged cured when the menstrual function had been re-established.

Case II.—Miss M. B. S. Aged twenty-four years. Has been suffering from amenorrhea for a year, which persisted in spite of all treatment. She was melancholy, and had a very poor appetite and other disturbances due to her suppressed menstruation. In November, 1901, I began giving her two capsules of Ergo-Apiol (Smith) three times a day. I continued this treatment without any appreciable effect, except that the patient seemed to feel more comfortable, and at certain times during the month she experienced the subjective sensations accompanying the onset of menstruation. Finally, her menses returned on April 21st, 1902. The menstruation was perfectly normal. One week before the next succeeding period I gave her two capsules of Ergo-Apiol (Smith) three times a day, and when the time came for the onset of the flow it appeared in a normal manner. The remedy was continued in doses of one capsule three times

a day while the flow lasted. Since the re-establishment of her normal function the patient has gained both mentally and physically, and regained her mental balance and her usual cheerfulness, so that she was discharged cured.

Case III.—Miss L. D. C. Aged fifteen years. A girl of fine physique, who had first menstruated at the age of nine years, but always very irregularly. The menstruation disappeared for a year and then returned. When admitted she was very irregular with a scanty flow that lasted but one day, and was accompanied by severe pain in the head, loins and pelvis. A week before her expected period in January, 1902, I began giving her one capsule of Ergo-Apiol (Smith) three times a day. At the end of one week her menstruation returned, and lasted four days, the flow being normal in amount and accompanied by very little pain. The same treatment was pursued in February, with similarly good results, and from that time on the function was fully established and remained so. There was a marked improvement in both physical and mental condition and she was discharged from the hospital cured.

From my experience with Ergo-Apiol (Smith) and from the experience of a number of other observers, whose findings are published in the literature of the past few years, this remedy represents an emmenagogue of the highest type of efficiency combined with the inestimable advantages of safety, trustworthiness and absence of any unpleasant after-effects. It is probable that Ergo-Apiol owes its efficiency to the particular type of Apiol that it contains, the pure product from which all irritating and injurious impurities have been removed. But it is unquestionably also the accessory remedies, which enter into the combination that contribute to the efficiency of the whole. Ergo-Apiol was easily and agreeably taken by all the patients to whom I administered it, and in no case was there any nausea, eructation, or any other gastric disturbance. Unlike most other emmenagogues, it requires only small doses continued for a comparatively short time to bring about the desired therapeutic effects. Ergo-Apiol (Smith) has not only a stimulating effect upon the menstrual function in amenorrhea, but also a tonic effect upon the muscle fibres of the uterus, for after it has been administered for a few months, the uterus is almost always able to resume its function without any further aid from external sources.

In conclusion, I may note the fact that the treatment of amenorrhea in the insane is always a matter of greater difficulty than in persons with normal minds, and that a remedy that produces perfect therapeutic results, such as I have noted with Ergo-Apiol (Smith) in insane women, may be expected to perform the same services even more promptly in the average case of amenorrhea as met with in ordinary family practice. This is proved conclusively in the numerous cases reported by various observers

who employed Ergo-Apiol (Smith) in menstrual disorders, and a partial list of whose publications appear in the annexed bibliography. Ergo-Apiol in the shape of capsules administered three times daily in doses of one or two, beginning a little before the expected menses, and continuing through the period, has proven the most efficient, prompt, safe, and pleasant emmenagogue that I have ever employed. My experience with the drug was such as to lead me to adopt it as a routine treatment in amenorrhea.—*From the Brooklyn Med. Journal.*

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A VALUABLE AID TO ANTITOXIN.

In connection with the use of antitoxin in the treatment of diphtheria and croup much benefit can be derived from the use of an antiseptic inhalant which will act directly upon the mucuous membrane of the throat. The effect of sprays is only temporary, while the inhalation of steam impregnated with volatile antiseptics is of limited value on account of the high degree of dilution in which they are present. On the other hand, Vapo-Cresolene has none of these disadvantages. Its vapors are diffused in the air and are directly inhaled, coming into contact with every portion of the diseased mucous membrane, destroying the bacilli, reducing the inflammation, and aiding in the removal of the diphtheritic patches. Unlike other antiseptics Vapo-Cresolene does not irritate, but is agreeable and soothing, and can be breathed with perfect safety by the youngest

child. Laboratory tests have shown the vapor of Cresolene to be destructive to diphtheria bacilli.

PLATT'S CHLORIDES AND THEIR USES.

To remove objectionable odors where sprinkling is inadvisable a cloth, wrung out of a solution of one (1) part of Platt's Chlorides and ten (10) parts of water, should be placed over, or near, the offensive article or place.

While lecturing recently, a Chicago physician and member of the School Board, declared the prevailing method of dry sweeping a prolific source of disease, due to the spreading of germ-laden dust.

Dust, dirt and germs are best removed from floors by first sweeping with a cloth-covered broom, moistened with water containing just a little Platt's Chlorides.

THE VALUE OF ECTHOL IN MEDICINE AND SURGERY.

The Journal of the American Medical Association is perfectly correct when it states editorially in its issue of April 8, 1905, that its own observation of medical literature indicates that echinacea is being used far more than formerly, as Ecthol (Formula:—Each fluid drachm contains 28 grains echinacea augustifolia and 3 grains thuja occidentalis) has grown into almost universal use among physicians of all countries since it was first introduced to the profession some 5 years ago. Discussing echinacea in a recent issue of the *Louisville Monthly Journal of Medicine and Surgery*, Dr. C. S. Chamberlin, of Cincinnati, writes as follows: "In my own experience, the results attending the use of echinacea have convinced me that there is no remedy of so great value in the treatment of cases of septic infection, and I have repeatedly used it in the cases of septicemia following wounds of the extremities, which I am confident, by any other means of treatment, would have resulted in the loss of the limb and possibly of the life of the patient." He further recommends it to eliminate toxins and to alter conditions which favor suppuration and inflammation, as in the case of abscesses, ulcers, gangrene, bites of venomous insects and reptiles, tonsillitis, the exanthemata, eczema and psoriasis.

TREATMENT OF FELONS.

Felons are classed as minor surgery and yet many a finger has been lost through their careless treatment. Antiphlogistine is a specific in incipient cases. Apply hot, change every 6 or 8 hours and resolution will as a rule occur without the formation of pus.

If pus has already formed incise deeply and freely. Thoroughness is essential. Evacuate and cleanse with a suitable antiseptic. Insert a drainage tube. Surround the finger with Antiphlogistine. Cut the drainage tube 1-4 inch above the surface of the Antiphlogistine. Cover all with absorbent cotton and a bandage. The results will be satisfactory.

QUININE WITHOUT EBRIETY.

When two such well-known drugs as antikamnia and quinine are offered to the profession it hardly seems necessary to indicate the special classes of affections which call for their use. Antikamnia is unquestionably a perfect substitute for morphine for internal administration. It has complete control over pain, while it is free from the undesirable after-effects of the alkaloid of opium. In cases of malarial fever the combination of antikamnia and quinine should be given as a prophylactic and cure. For all malarial conditions, quinine is the best remedy we have. But, associated with this condition, there is always more or less pain, and antikamnia will remove these unpleasant symptoms and place the system in the best condition for the quinine to do its work. There are a number of ailments, not closely defined, which are due to the presence of malarial poison. All such conditions are greatly benefited by the use of "Antikamnia & Quinine Tablets," each tablet containing $2\frac{1}{2}$ gr. antikamnia and $2\frac{1}{2}$ gr. sulph. quinine. The antikamnia in these tablets not only relieves the pain, but prevents the ebriety or ringing sensation produced when quinine is administered alone. In headache (hemicrania), in the neuralgias occurring in anaemic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition, the regular administration of these tablets is indicated.—*Medical and Surgical News*.

DR. HAMILL'S MEDICAL EXCHANGE.

The Canadian Medical Exchange—While the profession practically all know that Dr. Hamill of the Canadian Medical Exchange handles over 80 per cent. of all the medical practices and properties sold in Canada, which offers are every month found among our advertising pages, it may

not be generally known to the profession that he also locates young physicians in fields for practice where there are excellent openings and where the people have requested a doctor to settle. In fact, Dr. Hamill assures us that he always has on his register from 6 to 10 openings that are sufficiently inviting to induce any young man to start in with certain assurance of a good living from the first and plenty of scope to enlarge. Physicians desiring a short-cut to their needs in this line will do well to communicate with Dr. Hamill, Medical Broker, Janes Building, Toronto.

GLYCO-THYMOLINE IN TONSILITIS.

Inflammation in any form attacking the tonsillar region gives rise to symptoms of most distressing character and at the same time provides a most favorable soil for the entry into the system of other infections. It is well to remember that at first this disease is only a local disturbance affecting the capillary system and glandular structures, and if promptly and efficiently treated will remain local. The constitutional symptoms such as fever, headache, etc., only develop when there is considerable infection taken up.

In treatment the first indication is to increase local capillary circulation. A local remedy must will two requirements, i.e., a detergent antiseptic and a degree of permanency in effect. Many of the remedies which have been advocated for the varied forms of tonsillitis are antiseptic, but they are not sufficiently exosmotic in their action to increase the circulation, or else their effect is too transient. Glyco-Thymoline frequently applied in a 50 per cent. strength with a hand atomizer produces a rapid depletion of the congested area through its well defined exosmotic property, reestablishing normal passage of fluids through the tissues, promptly relieving the dry conditions of the membrane and giving an immediate and lasting anodyne effect. As a gargle a 25 per cent. solution hot may be effectively used, providing the process does not cause undue pain. The external application of cloths dipped in hot water and glyco-thymoline in 25 per cent. solution greatly increases the venous circulation.

WHY DOCTORS SMOKE CIGARETTES.

Why do so many doctors smoke cigarettes, is a question which an observant physician propounded the other day? One reason is that a doctor is liable to be called upon at any time, and so he naturally avails himself of his scanty moments of leisure to seek the convenient solace of a cigarette. A good cigarette, such as the "Sweet Caporal" has much to recommend it, and is the purest form in which tobacco can be smoked.



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ADAPTATION AND TUBERCULOSIS.*

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ON casting around for some aspect of the tuberculosis problem upon which to address this meeting, it struck me that it might be serviceable to take up the matter of adaptation in its relationship to the disease. The term possibly is unfamiliar to you, but it embraces a series of processes, both on the part of the organism, the human body, and of the micro-organism, the tubercle bacillus, which are of the highest importance. And I am of the opinion that it is the failure to realize the existence of these processes which renders it difficult for the majority of men to appreciate the various happenings in the course of this disease, and again the points at issue and their significance in the controversies that have arisen of late years regarding the same. It has seemed to me that all those, and they are many, who are interested in the work of prevention, would possess a more intimate appreciation of that work if they could acquire, as it were, a mental picture of the moves in the game,—of those moves whereby now the organism, now the micro-organism seeks to gain the advantage and checkmate the other. In truth it is a gruesome game but one of very vital import, this of the cells against the bacilli and the bacilli against the cells. Some of our moves are instinctive, or have been practised before against other bacteria; many have to be learned and tested during the course of play. Too often, not knowing the science of the game, and playing “bumblepuppy”—I forget its equivalent in chess—we make a wrong move at a critical moment and the game is lost, and loss is death.

Let us consider first the moves on the part of the organism, and in order to gain a clearer picture let us take the case of a disease of briefer course and apparently more self-contained in its gross effects upon the body. Has it ever struck you I wonder, what takes place in a case of acute pneumonia? This you know is a bacterial disease, due to a micrococcus, a minute rounded or lance-head shaped organism that hunts,

*Being the address delivered at the annual meeting of the Dominion Association for the Prevention of Tuberculosis, at Ottawa, March 15th, 1905.

if I may so express it, like the Northwest Mounted Police of the old days, or the Irish Constabulary, in pairs—hence we often speak of it as the diplococcus of pneumonia. You all know that the disease develops very rapidly. That rapid development is associated with an extraordinarily rapid multiplication of the diplococci so that these which, under ordinary circumstances, are not present in the lung, come to be present in teeming millions in the air sacs of the same, and there by their poisons, they set up so much irritation that all the air sacs of one or more lobes of the lung become solid through the intense inflammatory exudate that is poured out into them from the blood vessels, displacing the air that should be there. And so it is that in a very few hours the affected part of the lung comes to look more like a piece of liver than like a sponge with abundant air in its cavities.

And then you know that if all goes well, in four, or eight, or ten days, suddenly, in the course of a few hours, the crisis comes, the fever drops sharply, the patient feels better, and I may tell you that after this crisis we find the diplococci for the most part dead, or if not dead so weakened that they can have little effect on small animals.

This has always seemed to me as something approaching the miraculous, that bacteria grow abundantly in one of the tissues of the body for a few days, then as suddenly they are killed off and disappear. If they grow at first why do they not continue to grow—if eventually killed, why not killed at the start? Years ago we found out that this was not because they have exhausted the food supply. I do not know if this has been tried in connection with pneumonia, but it has been repeatedly tested in the lower animals in connexion with one or other of the diseases from which these may suffer; it has been found that the tissues will afford abundant nutriment for the bacteria. It is not, again, that they are poisoned by the products of their own growth,—this occurs it is true when we grow them on broth in a closed test tube outside the body,—but we can make an emulsion of a pneumonic lung and while, if we add the diplococci to this, some will be killed (for as I shall point out, there are substances poisonous to the bacteria in such a lung), yet when a certain number have been killed the rest will grow freely. If the poisons were produced by the diplococci themselves then the greater the number of bacteria destroyed the more these poisons would be liberated into the lung emulsion and still less the chance would be for any to remain alive and multiply.

Neither of these explanations will suffice. The only adequate explanation for this eventual destruction of the bacteria is that of adaptation. When first the diplococci began to grow in the lungs they did so because the tissues could not neutralize their poisons, but with continued growth and discharge of their toxins, these last diffuse out of the lungs

and act in the tissues elsewhere in less concentrated form, and these react, becoming educated until the moment is reached when the cells of the body produce sufficient counteracting poison to kill off the bacteria and to neutralize their toxines, which toxines it is that do all the damage to the system.

And here is the interesting and important fact—a fact I think too little realized by most medical men, although instinctively all strive to act up to it. It is not the lungs alone that are in action in destroying the germs of the disease and so bringing about recovery, it is not even the white corpuscles or leucocytes which, passing into the lungs, accomplish the good effects; the whole organism, or practically the whole organism, is actively engaged in the process. Do not think that by this that I mean that the germs of the disease are disseminated all through the body. In a case of pneumonia of medium severity, one that recovers in due course, the diplococci are confined to the lungs; we do not find them elsewhere, or at most they are few and far between. But, notwithstanding this, the whole body plays a part in the engagement.

You have all, I doubt not, heard much of late years about these white blood corpuscles or leucocytes; how they are, as it were, at once the main avenging army and the scavengers of the body; without doubt these play a great part. We can see them in various stages full of bacteria which they have taken up, and at times we can make out that bacteria are undergoing digestion and destruction. Nay, it is not difficult for anyone to experiment on himself, as Leishman has shown—to take a few drops of his own blood, separate off the white blood corpuscles and taking a drop of blood serum, holding these in suspension, add to it a number of disease-producing bacteria of one or other order; in fifteen minutes' time, kept at the body temperature, each little leucocyte can be seen to have taken up, it may be a score or more separate bacteria. But here is another fact. This eating up of bacteria does not depend upon the white blood corpuscles alone. It depends, as Wright and Douglas have shown recently, upon a curious interaction between the cells and the fluid of the blood. And if you take the white corpuscles of a man who has not had a given disease and place some in the fluid of his own blood, and place some others in the blood serum of a man who has successfully resisted that same disease—who has recovered from an attack—you will find that these little white blood corpuscles will take up very many more of the particular bacteria causing that disease in the latter case than in the former. There is, therefore, something circulating in the general fluids of the body after it has gone through an infectious disease, something not located but generalized, something which was not there before in any amount and has therefore been elaborated during the course of the disease, and this aids in the destruction of the bacteria of the disease.

The same was noted some years ago in connexion with typhoid fever and that not merely after recovery but during the progress of the disease. We utilize the fact now as a most useful means in diagnosing doubtful cases. In typhoid the bacilli grow more particularly in the lymphoid tissue of the intestine—for here is an interesting point to remember that the different bacteria of disease have their seats of election. Once they gain a footing in the body there are certain tissues in which they grow in greatest abundance, while at first they do not grow to any extent in other tissues, or in other words, if they do find their way into the other tissues they are easily destroyed. But while the typhoid bacilli thus grow locally, if we take the fluid of the blood of a typhoid fever patient on the fifth day of his disease or so, we find that this now has new or greatly exalted properties. Although we dilute that blood 40 or 50 times, if we place in it some of the actively growing typhoid bacilli they become motionless and clump together in masses. The blood fluid has acted upon them. Nothing of this kind occurs in similarly diluted blood from one who has not had typhoid. What does this all mean? It means that during the course of the disease there is gradually developed on the part of the organism as a whole, the power of coping with and neutralizing or destroying the micro-organisms of that disease. Something has developed, not locally but generally, which either was not there before or which now is developed in greater quantity than before. There is an adaptation to changed conditions. The body as a whole reacts and produces substances which tend to give it the advantage in the fight against its foes.

Need I remind you that the modern treatment of diphtheria makes use of this fact. We utilize the fluid of the blood of animals which have been inoculated with the diphtheria bacillus in order to give to the diseased human being antitoxic substances which those animals have produced, and produced in excess, in order to cope with the inoculated microbes. Where precisely these antitoxic substances are produced we are still engaged in determining. We know that the leucocytes produce one set, but the substance or substances which activate these and render them effective we know less about. Some are inclined to believe that the leucocytes also give origin to these. Recent evidence tends to show that certain tissue cells—of the liver, brain, etc.—elaborate them. It may be that in tuberculosis the muscle cells play some part.

So now to return to the case of pneumonia. Let us try to translate what happens there. Through some lowering of vitality the tissues of the air sacs, which in health can destroy individual bacilli, finding an entrance into the lungs, are overcome and the bacteria multiply and set up disturbance. Then the second line of defence comes into action—not so much the lung tissue itself as the leucocytes which belong to the gen-

eral circulation blood. They make their way into the damaged area, are unable to take up diplococci in sufficient numbers and destroy them; on the contrary, they themselves tend to be destroyed, and the diplococci continue to multiply. In the meantime the poisons from the diplococci have diffused out of the air sacs into the blood and so are carried all over the body, and with this we have the development of high fever. And now the cells of other parts of the body take up these less concentrated poisons or toxines and taking them up proceed to manufacture counteracting bodies which neutralize, or help in the process of neutralization of the poison, and once they start to do this they continue and produce more of the antitoxic bodies, so much in fact that the excess passes in to the blood and from the blood passes into the damaged lungs until the moment is at last reached when sufficient of these antitoxic bodies are present there to reinforce the action of the leucocytes and with this all the diplococci are killed and recovery ensues. I say reinforce the leucocytes, for the leucocytes are developed largely in the marrow of the bones and the later relays of young leucocytes have, before they reach the lungs, become accustomed and adapted to the bacterial poisons, and thus are much more powerful than the earlier drafts of leucocytes which passed into the lung. These, aided by the fluid of the blood, are effective, the former were not. Hence it is through the general adaption of the tissues in the organism and not merely through local efforts that the body overcomes infectious diseases.

Once one realizes that it is all so clear, and, if I may express it, so very human—so like, for example, what happened in the Boer War. There we had local irritation in one part of that vast organism, the Empire; local efforts were unable to quell the disturbances, and war flared up and there was great local damage and arrest of the normal local activities. It looked as though the part might be completely lost. The effects of this local disturbance rapidly diffused through and influenced the whole Empire and, like the leucocytes, soldiers were drafted to the seat of the irritation from all parts of the organism, even from distant portions like our own Canada. We contributed, as it were, from the marrow of one of our limbs. Those soldiers, at first unused to Boer methods of warfare, were at a great disadvantage and we had Nicholson's Nek and Colenso and other terrible disasters. But as the Boer methods became better understood our soldiers adapted themselves to them; the spirit of depression gave way to one of grim determination to overcome the enemy: more and more soldiers, contingent after contingent, from all parts of the Empire were collected and sent to the front. Supplies of all kinds were produced at a distance and poured into the focus of inflammation and at last the pathogenic organisms were completely overwhelmed and recovery ensued.

Now to apply all this to tuberculosis and its arrest. The disease, it is true, is of a different type—it is of slower development and more progressive character. To pursue my simile, if I may venture to do so without offence and without wishing to give offence, tuberculosis is to the human organism something like what Irish discontent is to the body politic. If we are healthy our first line of defence, the surface cells of the nose, mouth, throat, air passages and digestive tract can directly destroy occasional tubercle bacilli taken up by them; only if an excessive number be taken up are they killed by the bacilli. Healthy people that is can breathe in tubercle bacilli without harm resulting. That this occurs has been proved by examining the nasal secretion of nurses and students in tuberculosis wards and finding tubercle bacilli in the same, and I may point out the remarkable fact that in a well conducted tuberculosis hospital the nurses are found not to contract tuberculosis. They keep themselves in good condition.

The bacilli may get beyond this first line of defence into the lymph and blood and there may not cause any disturbance, being killed before they can multiply. Quite a number of cases are on record in which tubercle bacilli have been found in apparently healthy lymph glands showing no sign of tuberculosis. Again we can, for example, take two healthy young dogs and feed them with milk to which we have added a fair but not excessive number of active tubercle bacilli, and killing one of them two or three hours later, we can detect the tubercle bacilli in the lymphatic fluid draining away from the intestines. This is a process which, as I and others have pointed out, is constantly proceeding to a slight extent in connexion with the abundant bacteria of various kinds which people the intestines. Keeping the other dog for some weeks or months it may show not a sign of tuberculosis, and killing it at the end of this time we may not detect a sign of this disease in any region of its body.

But now, even if temporarily the general health is depressed, the history may be very different. The tubercle bacilli at the point of entrance, or it may be when they are carried into the circulating lymph or blood, are not necessarily destroyed. In many parts of the body they are, but if the organism possesses an Ireland—a region of constitutional weakness with poor circulation, and poor nutrition—if by chance the bacilli find their way into this, the cells cannot destroy them, but on the contrary they multiply, produce their poisons, killing the cells and developing a focus of inflammation—a tubercle. Such a region, as everyone knows, is the apical part of either lung. From its relationship to other parts there is poor circulation and nutrition, and, added to this—although here remembering my simile I must speak delicately—there may be something innate in the properties of

the cells themselves. Certain it is that here more particularly the tuberculous process may manifest itself.

A priori, one would think that the bacilli having once gained a footing in a part would continue to grow and spread from this focus, that growing, their concentrated toxines would depress the vitality of surrounding cells rendering them an easy prey, so that, of necessity, once the disease was established in the system it would go on from bad to worse with progressive invasion, poisoning and destruction of the tissues throughout the body until a merciful death ended the scene. This does occur in some cases in which the tissues seem to have no resisting power, but as a matter of fact it is by no means necessarily or usually the case. Progressive invasion we know, is the exception, not the rule. As a matter of interest I looked last week through the records of the 139 post-mortem examinations performed last year in my department at the Royal Victoria Hospital, and I found that while there were 18 cases out of the total, or 13 per cent. in which tuberculosis had assumed a progressive character and had surely been the cause of death, there were 41 cases, 29.5 per cent., or more than twice as many in which there was absolute evidence of old arrested or even healed tuberculosis (there were in addition three cases of progressing tuberculosis in which death was from some other cause.) The disease, as has been often stated before, is more often arrested in man than it is fatal, and the process in this arrest and healing must, from every consideration, be not so much by local effort as by the co-operation of the other tissues. We have clear evidence that this is so. Just as in typhoid fever so here, it has been shown, more particularly by Courmont, that the blood and body fluids of tuberculous patients contain a substance not present in healthy blood, a substance which causes the clumping of the tubercle bacilli. And, as pointed out long ago by Koch, if an animal has tubercular infection of one region, say the eye, the injection of virulent tubercle bacilli into another region at a distance, say the skin of the flank, leads it is true to a temporary local inflammation during which the bacilli are destroyed, but it is followed by no local development of the disease proper and by no extension from that region; a clear proof that under ordinary conditions the primary local development of the disease is accompanied by the development of increased resisting powers on the part of the rest of the tissues. Here again there is adaptation by means of which these other tissues of the organism as a whole reinforce the local effort tending to produce so much antitoxic or anti-bacterial substance that at last the system overwhelms and arrests the local growth of the bacilli.

I have not seen this matter hitherto worked out adequately, and as I believe it is useful to present to those interested in our work, even

though at first hearing—being perhaps to some extent novel—it may be difficult to follow and fully grasp. Once grasped we grasp with it the whole rationale of the treatment of tuberculosis. Let us just glance at this.

First, as to Koch's treatment by injections of tuberculin; that is, of the body juices and toxins of the tubercle bacilli. The basis of this treatment is clearly the carrying further of this natural process of stimulating the tissues in general to produce anti-bacterial substances by means of the circulating toxins. As we know by observation, outside the body of the individual tubercle bacilli do not produce much toxin; indeed it is only when they die or are destroyed that much poison escapes from them. Probably one of the reasons why tuberculosis tends to gain foothold in the body is that the bacilli are at once so slightly irritant and so resistant. As there is no extensive diffusion of toxins at the beginning of the process the rest of the tissues are not adequately stimulated; this especially when the body as a whole is in a low state of nutrition. By injecting these diffusible toxins we stimulate the cells in general to manufacture increased amounts of anti-toxic substance and thus aid the local resistance. I put this purposely in a general way; to discuss this matter in the terms of complements and amoebocytes and all the armamentarium of the modern bacteriologist, would utterly confuse, but this obviously is at base the rationale of the process.

But as all now know Koch's treatment is but partially successful. It is useless in advanced cases where the disease is extensive and where there must already be relatively abundant circulating toxins. To inject more toxins into such cases is to poison rather than to stimulate the cells. In dealing with the treatment of tuberculosis there are two factors to be taken into account. You may take a horse to the water but you cannot make him drink. You may supply a cell with tubercle toxins which are necessary in order to stimulate it to produce anti-toxins, but it may be so feeble that it will not react—will not produce these toxins. All its energies may be used up in the performance of ordinary everyday function. And here we have the basis of the modern treatment in which, as you know, we do not try to do anything specifically against the disease itself; on the contrary we leave the disease as such severely alone. But we do everything in our power to improve the general bodily condition. We enforce rest, so that the cells shall not be overcrowded and may have spare energy; we give abundant, easily assimilable food, so that they may build themselves up; we demand life in the open air with abundant oxygen and that toning up of the system, which the freshness and coolness of the air brings about more naturally than does anything else. For, just as a lax violin string will give no

note, while, made taut, it vibrates to the slightest touch, so by improving the tone of the tissues in general they respond more immediately and more fully to the stimulus of the circulating toxines and produce the counteracting bodies which, developed in greater abundance and poured out into the blood, can now act locally on the tubercle bacilli in the area of the disease.

We in short do everything we can to help the body to adapt itself to the changed conditions and this adaptation we know means also counteraction. The success of our modern treatment of tuberculosis—treatment, be it marked, purely empirical in its inception and based upon no adequate theory of the modes of defence on the part of the organism—this success is the strongest proof of the correctness of the conclusion reached along other lines, that recovery from infectious disease is not merely nor mainly a local reaction, but is a process in which the tissues not directly involved and the body as a whole take a most active part, becoming educated thereto during the course of the disease.

I have taken possibly too much of your time in discussing the moves on the part of the organism and have delved, it may be, too deeply for a general address. I would gladly think that my digging, if deep, has also been sufficiently broad in its scope to let in the light. Before closing some words must be said of that other matter, the moves made by the bacilli.

You must not look upon these producers of disease as fixed in their properties and unalterable; rather we have to realize that they also are capable of adaptation. For us it is a fortunate fact that their power of adaptation is not so extensive and so rapidly developed as that of the healthy human organism. This we must take as another instance of the fact that union is strength. It may be well that the individual cells of the body have not the same power of adaptation as has the tubercle bacillus, but while the bacilli are isolated and independent, the cells of the body are united and co-operate and the sum of their reactive changes may well be greater than the adaptative changes possible in an isolated tubercle bacillus. Nevertheless bacteria are capable of great changes, suiting them to altered conditions of their surroundings. There is, for example, a large bacillus, the bacillus megatherium, first found if I remember aright, upon the cabbage leaf; this is absolutely harmless for warm-blooded animals—one can inject these by the million into the rabbit without causing any recognizable disturbance,—but, as Vincent has pointed out, place some of these in a thin-walled celloidin capsule in the abdominal cavity of the rabbit, a capsule such that the fluid part of the lymph can easily penetrate through the walls and so afford nourishment to the bacilli, while the leucocytes and antitoxic bodies

cannot enter—we find that after sojourning there for several weeks the bacilli have become accustomed to their surroundings so that now they will grow in the tissues of the rabbit without any capsule being needed. From having been perfectly harmless they are now pathogenic, and can set up disease.

What is to be said regarding the tubercle bacillus in this connexion? In the first place we may have the complete assurance that Adam was not created suffering from tuberculosis. The bacillus, we may be fairly sure, from living it may be on foodstuffs outside the body, accustomed itself first to living on the surface and in the passages of the organism as a harmless saprophyte, and only later gained the power of living not on but in the tissues, and from that moment it became pathogenic. This, it is true, must have happened centuries and centuries ago, for the disease was known to and well described by the early Greek writers on medicine. While this is so I do not think that we must imagine that the virulence of the bacillus has remained the same from that day to this; the probability is that were the ancient Greek to come to life again and mingle with us moderns his would be but a brief visit on this earth; he would be carried off by fulminating malignant tuberculosis in a very short space of time, if even before that the modern influenza bacillus, or the pneumonia diplococcus had not marked him for its own. I mean here, that the indications are that there has been a steady adaptation of both organism and micro-organism, the one to the other; as the system has become more resistant, the bacillus has become more toxic. We have a parallel to what is here suggested in the remarkable history of the way in which the South Sea Islands were devastated by measles when that most puerile disease was first introduced by Europeans. We must suppose that measles originated in Europe and Asia at some period after the first natives found their way across to the South Sea Islands, or that the Aborigines did not carry it with them in their canoes when they colonized the islands, and so henceforth remained free. Probably it began as a mild disease, and as it became habituated to the human organism so did that organism become more resistant and the microbe increase in virulence *pari passu*; what continued to be a mild disease to Europeans therefore was most fatal to the Melanesians who had undergone this progressive adaptation.

We have abundant evidence bearing upon this matter of modification in the virulence of bacilli by growth in the organism of one or other species; adaptation that is, to the surroundings whereby existence is rendered more sure. By the passage of a given pathogenic bacillus through a series of animals—by inoculating one animal of a species, a guineapig for example, with a feebly pathogenic microbe,

then when the disease is at its highest taking some of the body fluids containing the germs and inoculating that into another guineapig, and from this again into another, and so on through a succession of a score or so—we can render the bacilli extraordinary virulent so that whereas the disease in the first series ended in natural cure, at the end of the series the greatly diluted body fluids, diluted so as to contain only a few rare microbes, when injected may cause death in from six to ten hours.

By this artificial process bacteria adapt, and more than adapt, themselves to the organism of the one particular species; but this does not necessarily mean that they have adapted themselves at the same time to conditions found in the organisms of other species. That may or may not be the case. An organism which by passage through a series of human beings has acquired greater virulence for man, may or may not gain increased virulence, say for oxen, and vice versa. On the whole the reverse is more often the case. As a matter of fact we have positive evidence that if we take two calves and inoculate them subcutaneously with equal amounts of cultures of tubercle bacilli, which have been gained from the cow and man respectively, the disease is very much more rapid in its progress, spreads much more rapidly and leads to earlier death when the bovine bacillus is employed than when the human strain has been used. This may be laid down as a general rule. Nay more, if only a moderate dose of bacilli gained from man be injected, nothing more than a local nodule is produced in the inoculated calf; there is no generalization, and after a few weeks or months no signs of the tubercle bacilli are to be made out. In view of the Interim Report of the British Royal Commission on Tuberculosis, I would lay special emphasis upon this point. That commission has in quite a number of cases caused tuberculosis in cattle by the injection of human tubercle bacilli. Because disease can be transmitted experimentally by injection of a number of bacilli far in excess of the number which in nature could possibly gain entrance at any one focus, it is by no means proved that under natural conditions these same bacilli are liable to cause infection. What the Commission should demonstrate in order to establish that human tuberculosis is dangerous to cattle, is that the minimum dose of human tubercle bacilli capable of setting up tuberculosis in cattle approximates to the minimum dose of bovine bacilli producing the like effect. This I am convinced is not the case. There may be examples of bovine infection of man in which the bacilli still retain the high grade of virulence for cattle, but everything indicates that these are the exceptions. So much so is this the case that Von Behring is now utilizing bacilli gained from cases of human tuberculosis to vaccinate cattle and prevent them from becoming infected from their fellows by means of the bovine tubercle bacilli. This is all now freely accepted;

the opposite case remains still a matter of some debate, though the two parties are coming to take a more intermediate position. This matter was discussed very thoroughly by Dr. Ravenel in the address before this Association last year, and Dr. Ravenel, you may remember, took the position that tuberculosis is rather frequently conveyed to man from cattle. I still hold that such conveyance is not so frequent as is generally accepted. I have never from the first taken the position that it never occurs, but I still firmly believe that a tubercle bacillus which has passed from cow to cow for a long period, while it becomes more and more virulent for cattle, becomes less and less virulent for man, so that under ordinary conditions we have not so much to fear from milk and other products containing these bacilli, so far, that is, as the fully developed adult is concerned; but with weakly young children the case is different. They are susceptible, and if a large dose of tubercle bacilli be given to them in the milk, I firmly believe that even relatively slightly virulent bovine tubercle bacilli may gain entrance into their system in such large numbers that the cells are unable to kill them and that here and there they may gain a point of growth, and once they grow they may gradually adapt themselves to the human organism, and so set up the fatal disease. I doubt if this necessarily occurs in all children; we have, that is, cases brought forward in which children have been fed upon milk of cows suffering from tuberculosis of the udder, without showing a sign of the disease. It must not be thought that I recommend that milk from tuberculous cattle should be drunk with impunity; it is simply repugnant in the idea that milk containing any form of infective disease should be used for food. The fullest precautions should be taken and legislation developed to prevent the use of milk from animals suffering from any form of infective disease. Still, undoubtedly, the danger is there.

Here I would only say that certain very interesting observations recently published support my view that the relative frequency of tuberculosis of the intestines in children must not be ascribed positively to drinking the milk of tuberculous cows; it may equally well be due to swallowing saliva containing breathed in tubercle bacilli discharged into the air from the lungs of men and women suffering from the disease, or may have been sucked from the fingers after a child has been crawling on the floor. And these are observations by one of the greatest bacteriologist of our time, a man who first made pure cultures of the bacillus of tetanus and was one of the first to work out the antitoxine treatment in infections, the discoverer also of the plague bacillus, and that man is the great Japanese bacteriologist Kitasato.

Now-a-days we have a thorough and wholesome respect for the Japanese and his methods, and not the least for his thorough knowledge and practical application of bacteriology. The nation which has taken to heart the dictum "if preventable why not prevented," has applied bac-

teriological methods in the conduct of warfare, sending bacteriologists with each division, which has had the wisdom to recognize that *le General Microbe* would be for her a far more powerful ally than Czar Nicholas's *General Fevrier*, that from the experience of recent wars for every one Russian put out of action by shot, or shell, or bayonet, four would be invalidated by pestilence and, accepting the warnings and advice of the bacteriologists, has managed to much more than reverse these figures in her own army; that nation and the bacteriologists of that nation deserve our respect. It is a recent paper by Kitasato that I wish to bring before you. In this, with a wealth of statistical data, he has shown that the deaths from tuberculosis in Japan are just about in the same proportion to the total deaths and the total population as are the deaths from this disease in European countries. There is in fact a remarkable similarity in his tables, suggesting very strongly that the factors at work are identical. In the second place, though here I confess his data might be fuller, he shows that in those under 18 years of age the number of cases of evident primary intestinal tuberculosis is certainly not less, but on the contrary rather more than among Europeans and Americans, namely 30 per cent. of the total deaths from this disease, whereas in Europe of late there has been a rather remarkable consensus of observations giving the proportion at about 25 per cent. But, as I have already stated, it is usual to attribute these cases in early life to infection from cow's milk, while Von Behring goes so far as to attribute most human tuberculosis to this cause—the use of cow's milk in infancy. But now, says Kitasato, the use of cow's milk for feeding infants is unknown in Japan; if a mother is unable to feed her child a foster mother is employed. Singularly little milk is consumed in Japan and a careful calculation made from the total population, from the census of milch cows throughout Japan, and the average daily amount of milk yielded per cow, indicates that the individual Jap on an average consumes daily just about three quarters of a teaspoonful of cow's milk. Even in Tokio, the largest city, where most milk is consumed, the amount per individual works out to two and one-third teaspoonfuls.

Next it is shown that bovine tuberculosis is unknown among the native Japanese cattle, though by cross-breeding with imported European cattle they become infected. Experimentally, subjected to a severer test than is ever likely to occur in nature, a certain number can be given the disease. A few, very few, cases have been reported in which the disease has been notified as found in native cattle and this only in Tokio and Yokohama where most foreign cattle have been introduced and the so-called native cattle may have been of mixed breed; for, in accordance with Mendel's law a certain proportion of cross-breeds are likely to have

the characters of the native sire or dam and to be distinguishable from the native race.

To epitomise: the facts gathered in Japan show that intestinal tuberculosis, which is as frequent there as in Europe, cannot be attributed to the ingestion of infected cow's milk, cannot therefore be of bovine origin and the inevitable conclusion is that if intestinal tuberculosis is moderately frequent and not of bovine origin, then, similarly, a large proportion of the cases of European intestinal tuberculosis is in all probability not due to infection from milk. In other words, these observations support the view that I have maintained for the last six years, that undue stress is laid upon bovine tuberculosis as a source of human infection. The danger is there; do not let me be understood, I am convinced that weakly children are susceptible to the disease conveyed through the milk of cows suffering from udder tuberculosis; only the danger has been exaggerated. With Koch I hold that infection in the great majority of cases is from man to man and that our main efforts should be in the direction of preventing such infection.

This does not mean that I would restrict the legislation regarding tuberculous cattle. Far from it. These observations of Kitasato support what I have urged all these years, that it is possible to eradicate bovine tuberculosis independently of our efforts to eradicate the disease in man. Kitasato points out that so far as the chronicles of Japan extend back through the centuries they tell of the existence of human tuberculosis, and yet although the disease has been present all these centuries the cattle of the present day are not infected. If the human strain of bacilli easily adapt themselves to an existence in the bovine organism this could not be possible. This is another link to the chain of evidence which led me to urge in 1899, before the Canadian Medical Association and repeatedly since, that we in Canada should lead the world in completely banishing the disease from among our cattle. The disease is altogether too prevalent in European countries, for example, for this to be possible—the cost there would be too great. We are remarkably free from the disease; still it exists and its eradication is obviously a national and a provincial concern. We are told that the Federal Government hesitates to interfere in the prevention of human tuberculosis, not because they do not recognize that this is a work of national import, but because doing this they would be trespassing upon provincial rights, and the law is above the welfare of the people. But the health of animals has been from Confederation onwards, a matter both of national concern and of federal legislation. I would once again urge that it is for the Government to select some one well defined section of our country and there to root out completely the disease from among the cattle. Let them take Prince Edward Island, for example, appoint inspectors and be prepared to

superintend the health of the animals on the Island for, say five years; let those inspectors make a census of all the cattle on the island, let them apply the tuberculin test and take over and compensate all reacting cattle, disinfect the byres and forbid any fresh animals to be landed without rigorous determination that those animals are free from the disease. I am convinced, first, that by the end of two years, if from the start they thoroughly entered into their work, the inspectors would find not a single case of the disease cropping up anew on the island. The disease, I say, only passes from animal to animal and not from man to animal under natural conditions, and if there are no infected animals to convey the disease no new case can show itself. In the second place, the farmers would be benefited materially; no longer would they be subject to loss from the disease decimating their herds, and what is more, the certainty that their stock was free from the disease, would enhance the value of that stock and afford a market for it for breeding purposes, not merely at home but in distant countries which despair of obtaining uninfected animals, their own stock being so riddled with tuberculosis. And lastly, the experience gained in eradicating the disease in one locality, would show how it can be accomplished most economically and surely in other parts and eventually throughout the whole of the Dominion, so that Canada, our Canada, would stand before the world as the first country to solve the great problem and to possess stock wholly free from this devastating disease, so ruinous to agricultural communities throughout the world.

This is no chimerical plan; it is a perfectly feasible experiment, assured of success from the first, causing little disturbance and capable of being carried out at no great cost. If the Government has not merely the fear of the provincial politician before its eyes but possesses a statesman-like foresight, if it has the welfare of the community at heart, the well-being of this Canada of ours, then I urge that it take up this work; that it make a forward move fraught with advantage to what is by far the greatest industrial interest in the country, even if it fears to take up measures for the benefit of the greatest national interest of all, the health and the well being of the people.

At the quarterly meeting of the governors of the Notre Dame Hospital held recently, Dr. Albert Demers was appointed medical superintendent of the hospital in place of Dr. F. A. Fleury, who has resigned. Dr. Fleury, intends to leave for Paris on June 29. He will spend two years on the continent studying diseases of the eye, ear, throat and nose.

INFLAMMATIONS OF THE NASAL MUCOUS MEMBRANE.

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ON considering the inflammatory conditions of the mucous membrane of the nose, we are reminded that the ordinary characteristics of inflammation are somewhat modified here, owing to the special type of vascular arrangement, and, also to the fact that, an equal amount of swelling and hypersecretion within the narrow nasal fossae occasions symptomatic disturbance.

(1) *Acute Rhinitis*.—The reason that chills of even moderate severity produce the common complaint of cold in the head, is to no small degree due to some hyperæmia and hypersensibility of the nasal mucous membrane, with or without some structural changes. Constant repetition of these vaso-motor disturbances within the nose may in itself render the membrane each time more vulnerable. If we would only consider the rhinitis as but a manifestation of a disturbance of the equilibrium of the heart and vaso-motor centres, we would find ourselves looking elsewhere than the nose for the real seat of the trouble. There is no doubt whatever but that auto-intoxication plays a very important role in this disease, and it is sometimes spoken of as the uric acid dyscrasia. Grayson says 99 per cent. eat too much and exercise too little, they are indolent, soft and overweight. These people are subjects of what, for lack of a better term, we call lithaemia, and it is to this general condition, much more than to any local abnormality within the nose itself, that their repeated attacks of coryza are due. Coryzas in these people, therefore, may be regarded as neither more or less than nasal signals of systemic poisoning. This systemic poison may, however, be present, and if the nose be healthy, but very slight inflammatory disturbance ensue. In a nose, structurally imperfect and, therefore, more vulnerable, the coryza may be marked. Inflammatory manifestations within the nose are also seen as premonitory symptoms in certain diseases, as measles, pertussis, scarlet fever, diphtheria, syphilis, etc.

Treatment.—From what has been said regarding the systemic poisoning in these cases it will naturally follow that the treatment should be directed to the elimination of these toxic irritants. Local treatment, directed to the nose, is a secondary consideration. Free catharsis should be one of the first measures adopted. Calomel, gr. $\frac{1}{4}$, and podophyllin, gr. 1-12, taken every hour, will be quite effectual. Mineral water, such as Apenta, or Hünyadi, should be taken every morning until the attack subsides. Vigorous exercise, such as boxing, club swinging, dancing, etc., will do more to palliate and shorten the attack than all the quinine,

Dovers powders, or hot drinks one could use. Very little food should be given, but an abundance of water allowed. In cases where it is desirable for public or social reasons, some remedy to lessen the acrid rhinorrhoea may have to be used. Tablets containing quinine, ammon. chlor., camphor, ext. belladonna fol. ext. opii, gr. $\frac{1}{2}$ each, will be found of real value, but not for continual use; because as the rhinitis is subsiding the secretion becomes thicker and tablets, such as these, will really increase the consistence of the nasal secretion and render it more difficult to expel. The diathetic factor may be met by using soda salicyl, soda bicarb., and vin. colchici sem., in repeated small doses.

Local treatment.—We are able to afford a great deal of comfort to our coryza patients by some form of local treatment. The nose may be first sprayed with a one or two per cent. sol. of cocaine and, after the turgescent mucous membrane has retracted somewhat, a mild alkaline spray, such as borol, 1 in 6, may be used to flush out the nose and nasopharynx. Adrenalin chloride sol. 1 in 8,000, may now be sprayed into the nose to accentuate and prolong the effect of the cocaine. Strong solutions of adrenalin chloride do harm. Various oil sprays will now be not only grateful but protective. Two per cent. camphor menthol in oil will act well. In those cases where the turbinates are slow to regain their normal size and the secretion remains thick and excessive the use of Boulton's solution will hasten the reparative process. This solution is made by mixing acid carbol. (cryst) grs. xxiii; tr. iodin co., m. Lx; glycerine, 3iiss in two ounces of distilled water. This solution is then placed in a water bath at 100 degrees, in a tightly corked bottle until colorless. It is then filtered and is ready for use. In those cases where there are repeated attacks of coryza on very slight provocation, one frequently finds some structural defect within the nose requiring attention. These cases will be greatly helped if care is exercised in correcting any vices, regulating clothing and ventilation. Excessive use of alcohol and tobacco must be stopped. Occasionally it is necessary to touch the mucous membrane covering the interior turbinate with chromic acid to excite the desired contractibility.

Massaging of the mucous membrane of the inferior turbinate by brisk rubbing with an oily solution on a cotton tipped probe will afford decided relief in those cases where the vascular tone is slow in returning.

(2) *Chronic Rhinitis.*—Various terms have been applied to the different kinds of rhinitis which designate the leading pathological changes found. It is not intended to speak separately of simple chronic rhinitis, chronic rhinitis, intumescent rhinitis, hyperplastic rhinitis, purulent rhinitis, atrophic rhinitis, or hypertrophic rhinitis; but rather to state how cases of chronic inflammation of the nasal mucous membrane may be

generally managed, with a few remarks on such additional measures a special type of rhinitis may demand.

Repeated attacks of acute rhinitis frequently lead to a chronic inflammatory condition of the nasal mucous membrane which causes some, though possibly slight, inconvenience, such as nasal obstruction or increased secretion. Very frequently such cases are found in those whose constitutional state is below par, or whose eliminative organs do not properly perform their functions. Many patients complain of obstruction only when in hot rooms or at night in bed, when one nostril or the other depending on the side lain on, becomes obstructed—the so-called intumescent or periodic rhinitis. Here we find, probably not actual hypertrophy of tissue, but rather a lack of tone or dilated condition of the vascular plexus beneath the inferior turbinal mucous membrane. Another class of patients complains of constant obstruction in the nose, nasal and post nasal discharge. Here we find marked hypertrophy of tissues carrying the inferior turbinal, anterior end of the middle turbinal and the septal tubercle. All cases of rhinitis are aggravated and, in fact, may be kept up by irregularities of the nasal septum, or some accessory sinus disease. It is of very great importance in treating these cases that a searching inquiry should be made into the habits and mode of living of each patient. Too much alcohol or tobacco may keep up the nasal irritation or be the primary cause.

Gastric irritation, constipation, want of proper exercise and ill-ventilated rooms play a part, and frequently a very material one in causing or keeping up the pathological process.

Treatment.—There are various means of reducing the chronic turgescence of the turbinal tissues. In those cases where we find the turbinated bodies swollen though reducible with cocaine on a probe, and in which the obstruction is periodic and frequently during sleep, we may pin the tissues down very nicely by means of the cautery. A fine, galvanocautery point, plunged deeply into the turbinal tissue and the current turned on for a few seconds, may, by creating an inflammatory condition within the plexus of veins, so lessen the blood supply that there is little subsequent tendency to vascular engorgement. The resulting cicatrix assists in pinning down the mucous membrane; or the cautery point may be gently drawn along the convex border of the turbinated body. After throwing off a small slough, cicatricial tissue forms and lessens the size of the turbinal body. Chromic acid may also be used, but, its action is very severe and it is difficult to limit its application. It has, however, many warm advocates, and in selected cases is of great value. A small V-shaped piece of tissue, base outward, i.e. toward the septum, may be removed which will give a nice result with a minimum loss of mucous membrane.

There are, however, a few cases in which we find not only thickening over the bone, but enlargement of the bone itself. Repeated cauterizations produce but little effect. Such cases are admirably adapted for partial turbinectomy. Some rhinologists unhesitatingly condemn any such operation, but I am firmly convinced that the operation is a very valuable aid in these cases, and one which gives a permanent and satisfactory result. Some advise the submucous injection of various caustics, such as zinc chloride; but I have had no experience with them. Massage of the turbinated body with a cotton-tipped probe has given me very nice results when the hypertrophied tissue was slight in amount.

In cases where we have accessory sinus disease, septal ridges, or spurs with defective post-nasal drainage, attention to these parts will generally correct the turbinal enlargement. The cold snare is valuable when the mucous membrane is very lax and can be engaged in the loop. One must not think that the possession of a cautery point is an essential feature in all cases of hypertrophic rhinitis. The cases are comparatively few that require its use, a point too few practitioners seem to pay attention to. There need be no after treatment in cases where the cautery has been used, beyond the use of a mild oil spray, such as menthol, with or without camphor and eucalyptus, in liquid vaseline.

Occasionally we find hypertrophic spots on the septum and floor of the nose, which may require light cauterization. Care must here be taken that the cauterization is quite superficial, in order that no necrosis of bone follow. Hypertrophy of the mucous membrane, covering the anterior end of the middle turbinal, is commonly found associated with disease of the antrum and ethmoid cells. Amputation of the tissue with Grünwald's forceps and snare gives prompt results. When the hypertrophy of the inferior turbinal is confined to the posterior extremity of the bone, the cold snare may readily engage it through the nose. A secondary hemorrhage is in these cases not infrequent.

(3) *Atrophic Rhinitis*.—The treatment of cases of atrophic rhinitis is one that has given rhinologists a great deal of worry. The two symptoms most complained of are the odor and the discharge. Cases vary greatly, some having a very penetrating odor, while others have but slight smell though a great deal of crusts. There is no doubt that many of these cases are at least associated with, or, caused by accessory sinus disease. This should be looked for and treated if found. We may, however, find evidences of old but healed sinus mischief.

In order to get rid of the odor, we must thoroughly douche the nasal cavity. A solution of sodii sulphatis, 2 per cent., or sodii carb., 2 per cent., will most effectually dissolve and clear out the debris, careful inspection by anterior rhinoscopy should then follow, and any remaining crusts removed by forceps. The nares may now be sprayed thoroughly

with alphazone, or a weak solution of hydrogen peroxide, followed by the alkaline solution to clear any remaining debris. Careful inspection should now be made for any small ulcers which are not infrequently present, and these should be touched lightly with phenol. A spray of zinc complete the treatment.

For patients use at home an alkaline douche for repeated use is necessary, grs. V in $\bar{3}$ i ; followed by a camphor-menthol application will be found that some such mixture as the following will, in most cases, control the odor and be at the same time sufficiently stimulating : Iodine, grs. viii ; pot. iod., gr. xvi ; zinci sulpho-carb., $\bar{5}$ ss ; creoline, m xlv ; aq. ad., $\bar{3}$ vi. This may be followed by an oil spray to keep the parts softer and lessen the tendency to the formation of hard crusts. Stewart Lowe has found great benefit following the use of Burrough's & Wellcome's tabloids of mucine and soda bicarb. Some cases are benefited by the use of submucous injections of paraffin. Careful attention to the toilet of the nose daily will make those cases quite comfortable. It must be impressed on the patient that he must make up his mind to do so for years. It will be found best to occasionally change the irrigating lotions. General constitutional treatment is essential in those whose general health is below par.

BROKE IN THE WARS; HOW THE WOUNDED JAPANESE ARE CARED FOR.

By J. GORDON SMITH,

Correspondent for the London Morning Post with General Oku's Army.

ON a dull-grey morning I stood before Shinbashi station and watched the wounded arriving in Tokio ; also gun-carriages, limbers, horses, and other trophies of war. There was more interest displayed by the throng which jostled me about the trophies than the wounded. The governmental practice is to send each batch of broken men to the divisional headquarters. These, whom I saw, were two officers and three hundred and forty-one men of the Imperial Guards of Tokio. About three months ago these men were entrained at night and went away without flare of trumpet, without any demonstration, steaming away under cover of darkness to land at night by the light of hundreds of torches on Korea's shores. Now they have returned with equal lack of demonstration.

Their home-coming was a sad sight. Under a leaden sky, on a dull, grey, depressing day they came from the train quietly and with no more show than if they had been a party of farm laborers returning from the rice fields south of the city. A great crowd was at the station but there

was no welcoming shout. All was done in the most dispassionate business-like way. The majority walked more or less briskly from the platform carrying their goods packed in blankets and in haversacks slung from their shoulders; the greater number were smoking cigarettes. Some were limping, their hands on the shoulders of others. A comparative few were carried on stretchers. Hundreds of 'kurumaya' with their little two-wheeled 'jinrikishkas' (literally translated, 'man-power cars') were standing in lines before the porch of the railway terminus, and, one by one, they were called by an officer of the medical corps to have a returned soldier seated in their little passenger carts. From the goods platform some Russian gun-carriages, three big horses—seeming large in comparison with the small Japanese ponies—some gun-limbers and ammunition wagons, and other trophies of the battle of the Yalu, were dragged out. The line of 'jinrikishkas' fell in behind.

It was a procession of strange contrasts. The silent people by the roadsides saw the spoils of war they prized so much—the Japanese are very fond of the display of trophies such as these—and they were pleased. The gun-carriages passed; the limbers rolled by. Behind were coolies with mushroomlike hats and blue blouses, jogging on with the wounded. The red crosses on their white canvas kimonas and hats, such as those of pastry-cooks, were not needed to manifest the other side of war—the seamy side. One after another the broken soldiers were trundled past the onlookers, many bare-headed, many with white hospital cap worn over their yellow braided regimental cap, the hospital kimona over their foreign cut uniforms; all with crimson blankets slung from their left shoulders, in striking contrast with the white garments. Some had their heads bandaged, others had arms or legs bound in lint. The brown faces all had a pallor; they were a pitiable sight.

The procession was a long one, stretched out over a mile. Hundreds stood on the streets, not crowding in any place other than at the station, but in an almost continual line on each side of the roadways, each person absolutely silent. The soldiers themselves seemed to take little interest in their surroundings, looking at the landmarks about them with indifference. The sentinels at the gates of the Russian legation; the officials at the windows of the War and Naval Departmental buildings, all else they saw on the way, had, seemingly, no interest to them. The old fellow with great smoked glasses giving him the appearance of a sage, who paid the 'kurumayas' at the hill-top, giving each coolie a ten sen piece and two sens—which allotment by the War Department for the transport of the sick and wounded were arranged in little piles on a big tray; the War Minister who drove past, his uniform glittering, in his carriage from the General Staff office, the 'gogai-runners' rushing by the little carts clanging their bells and shouting the name of the newspapers whose extras

they sold; none of these things had, as far as one could see, any interest to the wounded man. They were impassive.

The Eyu Hospital of the medical corps stands on the brow of a hill, not a stone's throw from the General Staff office, where the generals were sitting at a board of strategy devising new battles that would make more wounded even as the 'jinrikishkas' were rolled into the yard. Across the roadway from the ponderous gate which swings from two great beams joined by an equally massive beam overhead is the moat, beyond is the old stone wall of the feudal days with its overhanging trees hiding the palace buildings. The Tenshi Sama, for whom the men who had been injured in battle had gone to fight, and were eager to fight again, lived beyond that wall.

The hospital is a one-storied structure, square as a box other than for the wide porch, the curved roof of which, with a sweep, tiling, carvings and scrolled panels as pretty as those of a temple, gives the building a picturesque effect. Without this porch with its central panel of a sixteen-leaved chrysanthemum—the crest of the Tenshi Sama—the building would be a barren looking barn; with it the place is picturesque and pleasing. On the afternoon of that grey day when the several unfortunates broke in the war were squatted on the stones and grassy banks of the drive-ways as a spectacled doctor read the roll, the picturesqueness of the place was increased. The wounded squatting about added much to the effect.

All were kept sitting before the hospital entrance for nearly two hours. Everything was done with a system that was remarkably complete, often too complete, for regulations are sometimes carried to an absurd limit. The soldiers had all been landed at the hospital entrance and the doctor was calling the roll while assistants booked the names, when carts came with further supplies of hospital clothes. "Rikishkas" arrived with more doctors, and then came many carts, drawn by horses and oxen, bringing heaped loads of wooden bunks, the peculiar box-like sleeping places of Japanese soldiers in garrison. Three hundred and forty one beds were moved into the almost bare rooms of the hospital by night-fall, and meanwhile the sick and wounded sat outside conversing with each other and smoking cigarettes, exhibiting bullets from Russian rifles and telling and retelling the story of the battles for the benefit of the men of the medical staff—and telling also of the disappointment each man felt at not being allowed to remain at the front. Some spoke emphatically of wrong done them in ordering their return. They were aggrieved for they felt that they were still fit to fight. Those who had practically recovered during the voyage home in the hospital ship had petitioned to be permitted to return even when en route home; all longed to be back.

I will long remember the scene, it was very impressive. There was so much to be seen in the faces of the men who sat there, expressions of indifference, of fatigue, of hope, of sorrow—all the emotions were there displayed, but held well in check, for a Japanese will ever mask sorrow with gladness if others watch. This is the way with all. I saw a mother and brother greet a wounded soldier amidst the throng who sat before the hospital. His hand was bandaged, his arm swollen, and his face was as pallid as a brown complexion can show pallor. Yet he smiled, his white teeth showing. There were no tears in his eyes, and no outburst of joy, no emotional display of any kind marked the coming of those he loved. The old woman, with a well-worn grey kimono bound close about her, shuffled over the pebbles with her high "geta," and her other son, the carpenter—the tradesman has a mark of his guild shown by the great ideographs monogrammed on the back of his coat—walked behind her. Neither displayed any feelings; the other soldiers were sitting by and it is not in public that the emotions are to be displayed. The soldier must not be shamed before his fellows. The calm exterior must mask the feelings, no matter what one does behind the paper-screened walls of the home. So the soldier beat his back, bowing ceremoniously, and the mother and brother bowed equally low and with equal form. They spoke in polite commonplace words as they greeted each other, and bowing again separated. Imagine if possible an Anglo-Saxon mother receiving a wounded son without even a hand clasp. Yet that is the Japanese custom. Many were received by friends and relations as I watched with lack of emotional display. It is this seemingly restrained manner which the Japanese adopt in public, when whatever one feels, the indications of the feelings must be suppressed, that has given the foreign observer the impression that the Japanese are undemonstrative in their affections; that they lack emotion. But this is not so. In public the Japanese is undemonstrative. One would never think of showing any affection in public; that is for the home. And so, all who came to visit the wounded—people came and went until dusk—were received with ceremony. Meanwhile, the doctor who stood behind the table, placed on the steps on the entrance and heaped high with books and cards—there was a card for each man—called the soldiers one by one, and, with a parting bow and hurriedly spoken "Sayonara," each man hurried into the building. There the pharmacutists were busy distributing the medicines the doctors prescribed. It was nightfall before all were housed, and, as one of the dispensers informed me, it was morning before the work of attending to the reception of the men was completed. The doctors did not even have time to prepare afternoon tea for the volunteer nurses who had come from England and America; they did not have time to attend to the social requirements these ladies sought for many days. In time, though,

they were able to send many of these men who came to them from the front, back again to fight for the Emperor—and for Japan.

I visited the hospitals of Tokio where the "men broke in the wars" were being treated before I left for the front to join General Oku's army, and my experiences impressed me with the fact that the Japanese army surgeons are demonstrating to the satisfaction of medical men sent to Japan by various nations to study their methods of dealing with the sick and wounded that more men recover from wounds when operations are not performed than otherwise. With the armies of Japan now in the field the surgeons are operating in very few cases; in no case do they operate until the second day, and then only in cases of extreme urgency. In the main, the wounds of those shot in the field are dressed antiseptically by the surgeons at the front and the dressings are not removed until such time as the soldiers are brought to a hospital where the conditions are perfect for the treatment of the wounded. Even then, there are few operations. The wounds are bathed with an antiseptic washing, and then, as an American army surgeon whom I met at Sekijuji, or Red Cross Hospital, he said "they let the Lord do the rest—and He does it."

At both hospitals, the Biju Byoin, or military hospital and the Sekijuji, or Red Cross Hospital, I saw how successful indeed was the Japanese method of treating the wounded. The high percentage of recoveries in comparison with the records of other armies in past campaigns is convincing that this policy of "laissez faire" adopted by the Japanese military doctors is accomplishing wonderful results. Both hospitals are single-storied buildings with long narrow wards, windows and rows of beds on either side; the ventilation is excellently arranged and everything is spotlessly clean and sweet smelling. There are no bad odours. The percentage of recoveries was remarkable. I saw a large number of wounded who had perforating wounds in the chest going through the pleural cavity, yet not a case of pleurisy resulted. I also came in contact with some six cases of perforating wounds that passed through the abdominal cavity and out of the back, and, although the wounds were received not more than five or six weeks before, some of the men were sitting up in bed; two were walking about convalescent and complaining of the delay in permitting them to return to the front. True, the worst cases were probably not seen in the hospitals of Tokio. The men sent there, I understand, are selected from the cases brought to the southern depots by the hospital ships. But, nevertheless, the results secured by the surgeons are remarkable. The wounds I saw were nearly all clear perforations, and, unlike some bullet wounds I have seen, the orifice of exit was no larger, nor less clear than the orifice of entrance. There was no suppuration. I saw a bullet taken from a man's jaw and the jacket was perfect. The bullet had evidently been spent when it struck the soldier

and had been stopped on striking the lower bone of the jaw. It differed little in size from the bullet used by the Japanese and was a smooth, pointed, compound metal-jacketed ball. The doctor who accompanied me, offered the bullet to me, but the soldier was emphatic in his suggestions; he wanted the bullet as a souvenir and I gave it to him.

There were some remarkable cases. One soldier with whom I spoke, aided by an interpreter, had been struck by a bullet just under the left eye, where the orifice was plainly visible, and the bullet had passed through the sphenoid bone and perforated the tissue, coming out below the scapula of his right shoulder. His only suffering was from slight paralysis of his right arm due to the fact that the bullet had broken one of the nerve tissues. And, although not more than forty-five days had elapsed the soldier was able to tell of how he had been shot when charging with his comrade on the Russian position at Hohmatung. A more remarkable case seen at the military hospital was that of a man who had received a bullet in the forehead which had come out at the back of his head, both orifices being plainly shown, and he not only lived, but was sitting up in bed able to tell of his wound. He gives the credit of his recovery to a talisman in the shape of a samisen string which a geisha had tied about his waist. Another soldier received a bullet under his chin and left the top of his head; yet he was recovering. If the orifices made by the bullet were not so plain it would have been difficult to believe that possible. It seemingly is. The little spectacled doctor pointed out many instances in his text books; some of which were printed in English, some in German.

I met Surgeon-Major L. L. Seaman, of the U. S. Volunteers, at the Sekijuji-sha Byoin, and as we left to get into our 'jinrikishkas' he said to me, "After what I have seen I would hesitate to operate on a single case at the front." The feature of the Japanese surgeons' work is that he leaves the wound alone; there are few operations, indeed, almost none at all. Of course there are some cases and such things where the knife is used, but it is used no more than is absolutely necessary. The "first aiding" dressing of the Japanese is very simple, and when it is placed on the wound by the surgeon at the front it is not touched again until a hospital is reached. The wounds are usually aseptic. Some times the wounds are jagged, the detachment of the jacket or introduction of foreign matter, cloth, button, etc., or the impingement or ricochet of the bullet being responsible for such wounds. These are in the minority, though, for the greater number of wounds I saw in Japanese soldiers—and I saw hundreds in the field—had very minute orifices, those of entrance and exit being hardly distinguishable from each other in appearance. The Japanese believe it is far better to bandage a wound properly and avoid infection than to risk danger by an operation under such con-

ditions as prevail in the field. The Japanese are ever apt pupils and they are following well the examples set by Lister and Pasteur, to whom military surgery owes its greatest debt, and the Mikado's surgeons hold that the soldier who falls on the battlefield from the effect of a ball passing through any but a vital part of his anatomy and who has a "first aid" bandage promptly applied and is then transported to a general hospital where the Röntgen ray and the principles of asepsis and antisepsis can be utilized, has a far greater chance of recovery than when his wounds are treated on the field. In the war between the United States and Spain, the United States forces had 95.1 per cent. recoveries, while 4.9 per cent. died as a result of following these conservative methods. The Japanese have even better results.

While with General Oku in Manchuria I saw much of the work of the Japanese surgeons. They have much to do in keeping the armies under their charge up to the highest standard of health so that in the emergency of battle the soldiers may be fitted to do their duty. The surgeons are also sanitary engineers, and they select the sites for camps, arrange camp drainage, locate latrines, and inspect all water supplies. It is the rule of the Japanese armies in the field to send a corps of medical experts in advance of the army, and, before the army pitches camp, every water supply in the vicinity, every well, has been chemically analyzed. Placards are placed at all places where there is water. Some of the placards read "This water is good," others, "This water is bad" and still others "this water should not be used unless it is boiled for half an hour." These precautions and the good ration in use prevents intestinal troubles and there are few cases of intestinal affections.

While I am on the subject of hospitals a few words regarding the Japanese Red Cross Society might not be without interest. The Red Cross Society in Japan is an outcome of the Hakuaisha (Society of Benevolence) founded during the Satsums rebellion, the great civil war 1877. At the close of the rebellion the society was constituted a permanent organization, and, when Japan recognized the Geneva Convention, the Society of Benevolence procured a connection with the international committee at Geneva and was merged into the Red Cross Society of Japan. Now the society has over 800,000 members. An Imperial Prince is the honorary president and a Princess of the Blood head of the ladies' committee. H.I.M. the Empress is a constant visitor and patron of the hospitals of the society. Barons Ishiguro and Hashimoto, prominent Japanese medical men, are among the moving spirits of the society. The headquarters is the capital, and consists of a number of buildings for central offices and storerooms. One room, elegantly furnished, is set apart for the use of the Empress or Emperor, and in this room are excellent full length oil paintings of their majesties. The society's hospital,

the Sekijuji-sha Byoin, situated in Shibuya suburb, has 230 beds ordinarily, but more have been put in to accommodate the wounded that have arrived there. The Empress, who is a frequent visitor, has a room set apart for her at the hospital. The nurses, all gowned in white with an odd high-crowned cap, number two hundred and sixty in all. The store-rooms are large warehouse buildings each laden with an enormous reserve supply of hospital stores, stacks of lanterns, canteens, uniforms, blankets, litters, trains of ambulance, cots, dressing material, etc. The society is the richest in the world. Within two days it can load a hospital ship or a hospital train in readiness for the front. There is not the slightest confusion, the system being excellent. The nurses are all under military control. Two hospital ships are owned by the society, the Kakuai Maru and Kosai Maru. In peace time they are leased to the Nippon Yusen Kaisha as passenger vessels. Now they are engaged in carrying the sick and wounded back to Japan from the front.

FOOD FOR THE HEALTHY ADULT.

By W. J. WILSON, M.D., Physician, Toronto Western Hospital.

THERE is no food or combination of foods which one can say is the best for the healthy adult. The old adage "What is one man's meat is another man's poison," has a foundation in fact. What is proper food for one man will often not agree with his neighbor, and this without any accounting for the difference. There are so many factors to be considered one can scarcely make comparisons, not only between individuals, but even between nations.

Each race and nationality has its own special dietary, adopted from the experience of centuries and the force of environment. The Esquimo, the Nubian Arab, the Pampas Indians, the Fuejians and the inhabitants of Northern Norway, live almost exclusively on animal food; while in Southern Spain and India, we find pure vegetarianism. The Chinese and Japanese live largely on rice, but to this add eggs, fish, fruits and vegetables. In Ireland and Scotland fine specimens of the race are reared on potatoes and oatmeal respectively, with a rather limited supply of proteids and fats in the shape of milk.

All foods, whether animal or vegetable, are divisible into proteids, hydrocarbons, carbohydrates, salts, acids, water and flavors; and, whether we are meat eaters or vegetarians from necessity, we partake of at least two of these classes. The Esquimo, for example, has proteids and fats or hydrocarbons in the fish and animals he kills and from these also he receives his only supply of salts. The vegetarian finds his proteids in the various legumins, fats in such as the olive, and salts and acids in the various fruits.

*Read before the Toronto Medical Society.

In the temperate zones a mixed diet is the rule, the amounts and proportions varying with the individual. Laboring men, especially out of doors, can eat a total amount of food and, especially of meat, which would be excessive for the man of sedentary habits. This is due to the better oxidation in the outdoor worker. Irrespective of occupation, people differ very much in the amounts consumed, some eating three large meals per day with lunches between, others two meals, while some have only one large meal.

Where three meals are taken, especially with lunches, time is not given for the stomach and duodenum to empty themselves between the meals. Where only one meal is taken, the danger is over distention of the stomach. There is a growing impression that we could live on less meat than we do, and also that many of us habitually eat more food of all kinds than is necessary for the requirements of the system. This matter is, of course, regulated by the individual for himself; and only comes under our notice when something goes wrong. We should take as comprehensive a view of the case as possible; not only considering present conditions, but weighing the evidence of family history, and advising our patient so that he may avoid the dangers of over feeding on the one hand, and underfeeding, or injudicious feeding, on the other.

We know that certain families are prone to develop Bright's disease or arterio-sclerosis and, as a result, die from apoplexy. Is this due to something inherent in the tissues of the individual—an incident unavoidable in his life history, or do these people bring these diseases on themselves through habits of eating common to the family? We are inclined in some cases at least, to favor the latter conclusion. All peoples have adopted dietaries which seem well suited to their needs, and on which we cannot improve. These natural diets, as we may call them, have been evolved partly from the accumulated experience of the ages; and in part, from some peculiar relation between the needs of the system and the selective appetite of the individual. Nature, again, has made some wonderful provisions for our maintenance. In the Arctics, where hydrocarbons are required to keep up the body heat, the food supply is fats and proteids. The fat is exactly what is required for body fuel, and the proteids, which play such an important part in the absorption and utilization of oxygen, even under certain circumstances can be transformed into fats.

In the tropics, where the heat producing foods are not required, we have in abundance the acid fruits and vegetables with the legumens to take the place of meats, in the climate where meats keep badly.

Again, if we look at the composition of the various articles of diet, we find the proximate principles of food mixed in varying proportions in them all. For example, in the potato, which we look upon as a starchy food, we find 1.79 of nitrogenous matter, .16 of fat, to 20.56 of starch. In rice we have from 3 per cent. to 7.5 per cent. of nitrogenous matter.

In wheat, 12.42 of nitrogenous matter to 67 or 68 per cent. of starch. In beans, peas and lentils, we find from 22 to 24 per cent. of proteids, and 1.72 to 2.25 per cent. of fats. From these figures we conclude that, whether we be meat eaters or vegetarians, we of necessity partake of both proteids and fats. We find also that the vegetable proteids and fats are mixed with indigestible cellulose and are more difficult of digestion than the animal foods. In other words, the animal has assimilated the proteids and fat from the vegetable kingdom and presents them to us ready for easy assimilation. In the vegetable diet the indigestible cellulose forms more or less of a bulk in the intestinal contents, and aids in stimulating peristalsis. Advantage is taken of this in the so-called whole wheat bread.

The vegetable eater has a large amount of water in his food. This with the cellulose, forms a bulk of faeces; and the gases, formed through the fermentative processes incident to this kind of diet, keeps his bowels more fluid than they would be on the more digestible and less bulky animal foods.

Haig maintains that vegetables aid in the elimination of uric acid. If this be correct they would be the diet for those who are of the uric acid diathesis. It seems to us, however, that no matter what form of diet we adopt, it is important not to eat more than the system requires, and also that what we do eat should be prepared in the best possible manner.

A hopeful sign of the times is the interest at present being taken in cooking, and the number of institutions where cooking is now taught. This is a step in the right direction. It is most important for the health, development and well-being of a country that every young woman be taught how to cook, not rich pastry, but plain meat and vegetables with simple digestible deserts. It is unfortunately very rare to find a cook who understands the principle of her work. She will *boil* your egg till the albumin is tough, leathery and indigestible; serve your boiled potatoes, wet and soggy; make your toast so that the centre of it is like new bread; or make a pie with an undercrust wet and not fit for food. This kind of thing we grumble about during our summer outings, and at many of our best summer hotels where good wages are paid to cooks.

If cooking were put on a scientific basis and a mixed diet of meat, bread, rice, vegetables and cereals served, so as to produce a relish, the individual appetite could be depended upon in health, for the proportions of the various foods taken. The same proportions would not be taken each and every day; but on the whole, the results would average so as to supply the individual wants in a satisfactory manner. The foods, advertised as "new foods" and "pure foods" are often convenient as a change, but have neither the food value, nor digestibility indicated in their advertisements. In this, as in prepared foods for infants, it is better one should know how to prepare all the necessary foods at home.

HYPERNEPHROMA OF THE KIDNEY.*

By JAMES BELL, M.D.,

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Montreal.

WHEN you did me the honor some weeks ago to invite me to read a paper before your Society I gladly accepted the invitation and promised to send the title of the paper within a few days. When, however, I began to consider the matter I found it was not so easy to decide upon a subject. I realized that I could not come before you with some of the well-worn subjects which had been recently fully discussed in the journals, nor could I be excused for selecting a subject in which I had not had some considerable personal experience. In this dilemma a series of obscure and difficult cases of kidney surgery which I was compelled to deal with, decided the question for me. I have, therefore, chosen the subject, *Hypernephroma of the Kidney*, because in the first place it is a comparatively new subject, or at least the term is a comparatively new one; secondly, while the clinical history of hypernephroma is fairly constant, its pathology is very variable, making diagnosis and prognosis both difficult and uncertain, and thirdly it seems to me that a further study of these tumors from a clinical standpoint is essential in order that some clinical classification may be made possible, as up to the present time no such classification has been made. Finally, two, perhaps not very important circumstances influenced me strongly in this direction,—first, I am indebted to you, Mr. President, for having worked out the pathology of one of my cases a few years ago, and second, I had occasion very recently to operate on a case which was so typical in its clinical history and its gross morbid anatomy that I could not resist the temptation to bring it before you for demonstration.

There is probably no organ in the body which presents so many difficult surgical problems as the kidney. The typical forms of calculous and tubercular disease of the kidney are perhaps not more difficult of diagnosis and treatment than the average surgical conditions, but with these exceptions, and perhaps the exception of secondary infections the other surgical condition of the kidney are often very puzzling indeed. I refer especially to those conditions characterized by haematuria of renal origin, painful conditions of the kidney, and tumor formation.

I have employed the term hypernephroma, (not without many misgivings), as the title of this communication, because it seems to be applicable to a larger number of kidney tumors than any other of the many kindred terms which are employed by pathologists to designate such neoplasms. As you are aware, the many terms applied by pathologists

* Read before the Medical Society of Ottawa, February 10th, 1905.

to kidney tumors are derived from the interpretation of the histological appearance of the tissue of the tumor, which is generally coupled with a theory of its origin. Thus we have these tumors described as *Lipomata*, *Adenomata*, *Sarcomata*, *Adenosarcomata*, *Myxomata*, *Endotheliomata*, and various other combinations and qualifications, such as *Struma Lipomatodes*, *Struma Sarcomatodes*, and so forth, and the same tumor examined by different pathologists would often be described under quite different names, according to the interpretation of the tissue and the theory of origin of each investigator. This fact is fully illustrated in the six cases which I shall have occasion to refer to in this paper and which I believe are all true hypernephromata. In these six cases we find the following pathological diagnosis: Adenoma, Lipoma, Hypernephroma, Meso-thelioma, Angio-meso-thelioma, and *Struma Sarcomatodes Suprarenalis Aberrans*.

The difficulty in finding a term which would be properly applicable to this large class of tumors, which seems to be distinct from the ordinary sarcomata and carcinomata of the kidney, lies in the fact already mentioned that all the terms at present employed have been derived from the interpretation of histological appearances, coupled with theories of origin, and there is so much diversity of opinion among pathologists on these points that it seems hopeless to look to them for any substantial foundation for such a term. Hypernephroma is a term which was applied by Birch Hirschfeld in 1896 to a class of tumors which were thought to have their origin in the tissues of the suprarenal gland, either in the gland itself or in the so-called "rests" of adenal tissue. Grawitz, in 1883 had promulgated the theory that a large number of kidney tumors had their origin in the suprarenal gland tissue. He especially included tumors which had previously been called renal lipomata and he gave to this class the name *Struma Lipomatodes Aberratae Renis*. These tumors have since been very generally described as "Grawitz" tumors. Grawitz pointed out certain points of similarity among fatty tumors of the kidney and attempted to bring them all into one class. He recognized that their chief points of resemblance lay in their macroscopical appearance, their position and clinical course and that they varied much in their histological characters. He stated that he often, *but not always*, found the histological appearances to resemble to some extent the adrenal cortex and he, as a working theory, ascribed their origin to misplaced portions of adrenal tissue. The term Hypernephroma has now superseded the somewhat cumbrous term of Grawitz and it means both etymologically and in the sense in which it was used by Birch Hirschfeld, and since then by others, tumors which show evidence of having originated in adrenal tissue and it cannot of course therefore be properly applied to any other form of tumor.

But some of these tumors are very small and some grow very slowly, and some undergo degeneration, while others are very malignant and grow very rapidly, and probably some are at first non-malignant and become malignant later on. Again, it may not always be possible to demonstrate that a given tumor has originated in adrenal tissue, even when such is the case, and besides, diagnosis, to be of practical value, must be made before operation or autopsy? A careful consideration of the subject has led me to the conclusion that these tumors are much less rare than has generally been thought, and at all events that we find, clinically, a class of tumors of the kidney characterised by pain and hæmaturia, as early symptoms and tumor development which may be slow or rapid. They may be benign or malignant, sometimes ending in degeneration when non-malignant and sometimes suddenly developing evidences of malignancy. Anatomically they are encapsuled and contain much fat, when not too far advanced in malignancy; they spread secondarily by blood vessels, and never by the lymphatics (or only very rarely); in these respects differing from ordinary cancerous growths, as was pointed out by Bilroth many years ago. It is to these tumors as a class, (which class corresponds to that described by Grawitz pathologically), to which I have ventured to apply the term Hypernephroma, as a clinical diagnosis, believing, that probably most of them could be shown to conform to the essential histological characters, while admitting that perhaps in some, demonstration might be impossible owing to alterations in the tissue by degeneration, &c.

The six cases to which I wish to refer very briefly arrange themselves into three subseries: (1) Cases 1 and 6 are either non-malignant, or at least the characters of malignancy had not developed prior to operation. They were not adherent to surrounding structures nor were there any evidence of metastases. They were both also slow-growing.

Case 1 was a French-Canadian woman aged 39, who was admitted to the Montreal General Hospital on September 15th, 1890, suffering from irregular fever, exhausting foetid diarrhoea and copious night sweats, with a large tumor in the right lumbar and hypochondriac region. She had a marked tubercular history and was the mother of seven healthy children ranging in age from 14 months to 23 years. Early in 1886 she had had symptoms which caused her to think that she was pregnant; soon after, she had pains in the right inguinal region and hæmaturia and discovered a small tumor about the size of a hen's egg in the right lumbar region of the abdomen. She remained in good health however until December, 1898, when she became feverish and lost flesh. Septicaemic symptoms then developed and continued till she came to hospital. After examination the tumor was thought to have some causal relation to the septicæmia and was removed through an abdominal incision on October 4th, 1890. The tumor had a horribly persistent fæcal odor when opened.

The patient died 16 hours after operation, apparently from septicæmia, as there was nothing in the operation to account for her death. This tumor, which had a central cavity, the result of degeneration, was very carefully studied by the late Prof. Wyatt Johnson, who called it an Alveolar Sarcoma. Duration of symptoms $4\frac{1}{2}$ years.

Case 6—Mrs. A. D., aged 37, first noticed a tumor in the right side just below the costal border two years before operation, when she was three months pregnant with her last child. There never was any hæmaturia or any alteration in the urine although there was some frequency of micturition at one period. There were slight pains and a certain point in the tumor was slightly tender. The tumor was removed transperitoneally on the 19th of January, 1905, and the patient has made an uneventful recovery. This tumor has not yet been fully studied, Prof. Adami believes it to be a lipoma, but Dr. Keenan and others think that it may yet be shown to be a true hypernephroma; at any rate it may safely be classed as a "Grawitz tumor." The duration of symptoms was two years.

These two cases are practically identical in clinical history and in the gross appearances of the tumor, except that in the first case degeneration had begun in the centre of the tumor and in the second case there had been no hæmaturia.

In the second subseries, (Cases 2 and 5), the clinical history seems to show a premalignant period of about five years in each case with a sudden and rapid development of malignancy; at any rate in each of these cases there were symptoms of hæmaturia and pain for as much as five years before the tumor was discovered or the health was seriously impaired. The tumor would probably have been discovered in each of these cases had it been looked for as in each case it was as large as a full-term foetal head when discovered and did not grow rapidly while under observation.

Case 2.—J. J., aged 50, had an attack of left renal colic in 1893 followed next day by what was thought to have been the spontaneous passage of a small calculus (although it was not demonstrated), and hæmaturia which lasted for a week. In November, 1897 he had another attack of left renal colic but did not observe anything to indicate the passage of a stone. Hæmaturia persisted for two weeks and he then remained quite well until January, 1898, when he slipped and fell on the street; this fall was followed by pain in the left loin and hæmaturia, which lasted about two weeks. On the 11th of April, 1898, he had a severe attack of pain in the left loin, while in bed at night, which was again looked upon as renal colic and was relieved by a hypodermic injection of morphia. Pain and hæmaturia persisted for about a week. Early in February the patient had discovered the tumor but he did not pay any attention to it.

It was then, according to his account, as large as it was on his admission to the hospital—about the size of a cocoanut. On admission to hospital on May 1st, 1898, the urine was normal, except for a few leucocytes discovered microscopically. On the 4th of May the kidney was exposed by a loin incision and opened with the expectation of discovering and removing a calculus. On incising the kidney, however, a large quantity of grumous material was removed which was at first thought to be altered blood clot. There was no evidence of calculus or of pus. Twelve days later the kidney was removed through an abdominal incision and the patient made a good recovery but recurrence in the cicatrix took place in 3 or 4 months and the patient died in July, 1899. There was no autopsy. The diagnosis of the kidney tumor was *Struma Sarcomatodes Suprarenalis Aberrans*.

Case 5.—H. R. B., aged 59, was admitted to the Royal Victoria Hospital, May 30th, 1904. He had had slight dull pain in the left loin at intervals, especially after exertion, for the past five years. In December, 1903, he began to suffer from attacks of nausea and vomiting after eating. In January, 1904, he had the first hæmaturia, a very bad attack in which he says that he lost three quarts of blood; he had also had five or six attacks since but none of them so severe as the first one. Since January he had had some frequency of micturition and had noticed a whitish deposit in the urine. The patient was very weak and ill with a large smooth tumor in the left loin and hypochondrium, as large as a full-term foetal head. The urine was acid, sp. gr. 1020, and contained some albumin and a slight deposit of mucous and pus as well as numerous red blood cells microscopically. An exploratory operation was performed on the 9th of June, but no attempt was made to remove the tumor. The patient died a few hours later. From the autopsy report I take the following statements: "The left kidney weighed 960 grammes, showed endothelioma with secondary growths in right kidney, lung and pleura, also thrombosis of the interior vena cava." Subsequent microscopical examination, however, has I believe led to a definite diagnosis of hypernephroma.

In the third subseries there is evidence of greater malignancy and probably of malignancy from the very outset.

CASE 3.—A. C. D., aged 27, was admitted to the Royal Victoria Hospital March 3rd, 1903. The first symptoms began in this case in June, 1902, with sudden severe pain in the right loin and hypochondrium. The pain and tenderness continued and the patient soon began to lose weight and practically was incapacitated for work from the very onset of the symptoms. There were no urinary symptoms and on admission the urine was normal. Exploratory operation was performed on the 3rd of

March and the patient died on the 12th. The autopsy showed hypernephroma of the right kidney and suprarenal capsule and direct extension into the inferior vena cava and renal artery a large secondary growth in the liver multiple small secondary growths in the lungs, and thrombosis of the inferior vena cava and its branches.

CASE 4.—C. S., aged 4, was admitted to the Royal Victoria Hospital December 1st, 1903, with a large tumor of the right kidney. This child had been well till the previous March or April. From that time his mother had thought that he was not quite well but he had had no definite symptoms until September 20th when he fell across a door-step striking himself a severe blow across the right side of the abdomen. The tumor was then discovered by his mother and described by her as a "ridge" extending round the side, and apparently quite large. The tumor increased steadily in size till the patient came to hospital. He never had at any time hæmaturia or other urinary symptoms and on admission his urine was normal. An exploratory operation was performed on the 10th of December, but the tumor was found to be inoperable. On the 13th of December the patient was again anæsthetised and the tumor incised and 28 oz. of grumous contents resembling altered blood clot removed. The child died the next day. Autopsy discovered multiple tumors of the left kidney, but no secondary growths. Pathological diagnosis: Meso-thelioma of the right kidney, Multiple Meso-thelioma of the left kidney.

In these two cases there never was any hæmaturia, but it is not at all remarkable that hæmaturia should be absent in some cases as when it occurs it is ascribed to invasion of blood vessels by the new growth; neither is it remarkable that in all these cases the urine was practically normal as the new growth simply pushes aside the kidney structure in the less malignant types and in the earlier stages of growths; and arrests secretion entirely, in the more advanced malignant forms.

There were therefore in this series three degrees of malignancy; in two cases there was no malignancy, or only latent malignancy; in two others a latent malignancy for five years in each case and in the remaining two cases very active malignancy from the first appearance of symptoms. A general study of these cases and more especially of the very various modes of termination, leads one to ask whether the series may not be extended in both directions? For example, when malignancy does not appear and degeneration occurs, as has been demonstrated in a certain number of cases, is it not possible that the result may be ultimately a large cyst of the kidney? Such sacs of fluid are frequently met with and are generally diagnosed as chronic hydronephrosis, even where operation has demonstrated a patent ureter, the absence of any evidence of past or present obstruction and a large sac of fluid which possesses none of the special

characters of urine. With your permission I will mention very briefly two cases of this kind :

CASE A.—Mrs. L. B., a healthy, well nourished woman of 41, came under observation June 7th, 1903, with a sinus in the right loin. The first trouble noticed had been temporary retention of urine eight years previously, followed by some almost continuous discomfort about the side. In February, 1903, an ovarian tumor was diagnosed and operation was undertaken for its removal. When the sac was found to have its origin in the kidney, operation for its removal was abandoned and it was drained through the loin. The sinus persisted and discharged large quantities of fluid. The sac was removed through a loin incision on the 11th of June, 1903, and the patient made a good recovery. The ureter was patent where cut across; the proximal part being lost in the tumor wall. There was no calculus or other evidence of obstruction.

CASE B.—Mrs. I., aged 44, came under observation on March 4th, 1905, with a large tumor in the right loin and hypochondrium. It was diagnosed as hydronephrosis. She was a healthy woman, the mother of three children. At 18 years of age she had had a sudden severe attack of pain in the right side which lasted a couple of hours and ever since she had had from time to time similar attacks of pain in the right side and occasionally some frequency of micturition. There had never been any blood in the urine and the urine on admission was quite normal. On the 16th of March, the tumor was exposed by a loin incision and 60 oz. of dark fluid was withdrawn through a trocar. The sac was then removed and the ureter was found to be patent and apparently normal, the relations of its proximal end to the sac could not be traced. There was no calculus or other evidence of obstruction. On examination the fluid was found to be alkaline and to possess none of the characters of urine. It was thought to be altered blood. The wall of the sac showed an advanced grade of fibrosis.

These two cases appear to me to illustrate a gradual cyst formation in the kidney, the process beginning with definite pain from which the patient continued to suffer more or less throughout the entire history. There was neither ureteral nor renal obstruction and the history suggests to me that probably the primary condition was a small non-malignant "Grawitz" tumor which instead of becoming malignant degenerated and became a syst. I could quote several other similar cases from my own experience, but even if time permitted no good purpose would be served by doing so.

At the other end of the series we have hæmaturia,, usually one of the first symptoms of hypernephroma of the kidney and a symptom which it is often impossible to explain or account for. The following are brief notes of two such cases :

Case I.—W. L. C., aged 42, came under observation on the 12th of May, 1904. He had always enjoyed good health until December, 1903, when he felt "run down." In February, 1904, after an attack of trembling and nervousness, hæmaturia began and persisted without intermission until operation. He had no urinary or general symptoms and was constantly tender below the left costal border, although the kidney was not definitely palpable. On the 14th of May the kidney was exposed and delivered through a loin incision and nothing abnormal detected. It was incised along the convex border and the ureter catheterised. The incision in the kidney was closed by cat gut suture, the kidney returned and the parietal wound closed. The patient made an uninterrupted recovery and the urine improved from day to day until five days after operation it was perfectly normal and continued so while he remained under observation and to the best of my knowledge continues perfectly normal still.

Case II.—Miss E. D., aged 34, came under observation November 6th, 1904, with a history of an attack of grippe in March, 1903, with aching pains in the lumbar region which lasted for about a month. In March, 1904, she had a similar attack which lasted a few days only, but the pain returned again in May and continued till the end of August. Early in September she caught cold and for a couple of days was troubled with a frequent desire to micturate. On the 22nd she first noticed blood in the urine and from that time it continued bloody until operation on November 30th and she had attacks of pain which were thought to indicate the presence of calculus in the kidney. There was also slight, but definite tenderness over the right kidney which was palpable. The kidney was exposed by a loin incision, delivered through the wound and carefully examined. No evidence of stone was found, nor anything abnormal, except a small pale area on the convex border, in the upper pole of the organ, a portion of which was excised for microscopical examination with negative result. The kidney was split from end to end and the calyces explored. The patency of the ureter was demonstrated with the ureteral catheter. The kidney incision was closed by cat gut sutures and the kidney fixed to the parietes in its normal situation and the parietal wound closed. The patient continued to pass bloody urine and on the 4th of December, four days after operation she had a very severe hæmorrhage per urethram. Moderate hæmorrhages persisted and on the 22nd of December the kidney was excised. On examination it showed a large necrotic area at the site of the pale area already mentioned and some small necrotic areas throughout the organ, but there was no evidence of new growth. (There are other interesting features about this case but they do not concern us in the present discussion.)

I have now presented very brief reports of ten cases, six of which are, in my opinion, "Grawitz" tumors, if not strictly speaking hyperneph-

romata, (a class which I believe includes the great majority of all kidney neoplasms). Placed in three subseries they illustrate a gradation in development from the slow-growing, non-malignant, (or only potentially malignant), to the rapid growing and very malignant types. Two other cases are kidney cysts which from their clinical history and pathological examination seem to have resulted from a degenerative process in the kidney substance independent of obstruction to the overflow of the urine. Knowing as we do that the non-malignant "Grawitz" tumors sometimes undergo degeneration, may these cysts not have been produced in this way; just as we find brain cysts which we believe to have had their origin in blood clot which had been effused many months or years previously? The two others are cases of hæmaturia in which the kidney was carefully examined and no lesion found to account for the bleeding. May these, therefore, on the other hand not be due to the very early stages of development of such tumors in which further progress is sometimes arrested, instead of proceeding to tumor formation or degeneration and cyst formation?

Such is the theory Mr. President which I venture to suggest. There are many interesting points which offer themselves for discussion in this connection, such as early diagnosis and early operation (before the period of malignancy, early growths in other organs, etc.), but as I have already, I fear, wearied you with details in support of this theory I will not further trespass on your good nature.

MELANCHOLIA VERSUS OVARIAN CYSTOMA.

By ERNEST A. HALL, M.D., Victoria, B.C.

"The saddest chapter in the history of disease—insanity—probably the greatest curse of civilized life."—Osler.

SINCE my last report in the *American Journal of Surgery and Gynecology*, which contained deductions from the examination of one hundred and twenty-five females who were victims of "mental disease," I have examined four additional cases, three of which were submitted to operative treatment. In no case had a pelvic examination been made subsequently to the development of the mental trouble. In all cases distinct pelvic lesions were found. In one there was a large parovarian cyst containing two gallons of fluid; in another, a cervical polypus and myometritis; in a third, perineal rupture; and in a fourth an ovarian cyst. The post-operative course has been satisfactory in the three cases, but in one the recovery was so remarkable that a brief history would not be out of place.

Case No. 126.—Mrs. —, aged 37, good heredity, three children. She had had no serious illness after the birth of last child, four months previous to my examination, when she developed pelvic abscess, which was opened externally. During convalescence she gave manifestations of alteration in general demeanor, becoming careless of home attachments and domestic responsibilities. Definite delusions with melancholia developed to such an extent that the question of removal to the hospital for the insane was discussed. She came under the care of Dr. Frank Hall, with whom I examined the case. We found an ovarian cyst as large as an orange, with slight pelvic adhesions. After considerable delay, Dr. Frank Hall was granted the privilege of operating, removing tumor and both appendages. Upon recovery from the anæsthetic, the patient showed marked mental improvement and, within a week, had lost all delusions and depression, and has continued well.

The saddest chapter in the treatment of insanity has been the tardiness of the profession to apply to these cases of so-called mental disease the simple principles of modern surgery.

A. Sheldon, *British Medical Journal*, December 17, 1904, advocates a posterior or lumbar incision in certain appendicitis operations. In this method a vertical incision exposing the quadratus lumborum is made along the outer border of the latissimus dorsi, and extending in an upward direction from the crest of the ilium. The second incision is made transversely close to the iliac crest, through the lumbar fascia and the transversalis, exposing the parietal peritoneum directly over the ascending colon and caecum. It is stated that in cases of suppurative appendicitis the abscess, except in some very rare forms, is in direct contact with the caecum, and can be opened more quickly and with less difficulty and danger through a posterior incision than by any other route. The abscess is by this method opened in the most dependent part, and the infected area is reached and treated without free exposure of the omentum or small intestine. In instances of the common and serious complication of retroperitoneal infection drainage is much more efficiently established through a posterior than through an anterior incision. With the posterior incision there is less risk, it is held, of post-operative hernia. The author has practiced this method in fifty-eight cases, and has found no disadvantages in it.

CURRENT CANADIAN MEDICAL LITERATURE

The Canadian Practitioner, May, 1905.

NEUROLOGY AND THE PREVENTION OF INSANITY IN THE POOR.

Such is the title of Dr. Campbell Meyers' address at the Toronto Clinical Society. He agrees with those who think that advances in neurology must be made along the lines of clinical observation rather than along those of physiology and pathology. He goes on to deal with that portion of neurology known as neurasthenia or incipient insanity. He thinks that a better term would be cerebrasthenia for that class of cases where the mental symptoms predominate. This condition is one of much importance as its proper treatment is the means of preventing many cases of insanity, which would be as great a blessing as the prevention of tuberculosis. From an economic point of view the prevention of insanity among the poor is of great importance, as so many of these cases linger so long in the asylums that the expense to the state becomes very great. He contends that acute mania and melancholia can in a large majority of cases be prevented by proper measures, if these are taken sufficiently early.

Dr. Meyers dwells at some length on the great sufferings of these patients. Their misery is frequently very intense, and anything that can be done to alleviate this state of mind is in the interests of humanity as well as a means of preventing a very serious after break-down. He cites a case where the patient stated that his suffering from the nervous condition was severer than from a fracture of his femur which he afterwards sustained.

It is claimed in the address that students do not receive sufficient education and clinical experience on such cases. They receive instruction on the fully formed types of insanity, and have good books on mental alienation, but the incipient stage, the condition if ill defined neurasthenia, or cerebrasthenia, is overlooked. He goes into practice with an inadequate knowledge of such cases and how important they are, and too often comes to look upon these patients as whimsical or fanciful and gives them but little real attention. The end is often very disastrous.

There is a strong prejudice in the mind of the public against sending a person to the asylum, and this is in part due to the historical traditions

in connection with the former harsh treatment of the insane. The important direction in which improvement must come is in a better education of the student on the border line where disease of the nervous system is likely to merge into insanity. The idea is too prevalent that there is a chasm between the practice of medicine and the treatment of insanity. Another mistake is in not frequently enough recognizing that insanity is brain disease with mental symptoms.

Three suggestions are offered: To admit incipient cases and neurasthenia into the asylums without certificate, to establish psychopathic hospitals for nervous cases such as neurasthenia, and to have special wards for such cases in the hospitals. The third suggestion is the one favored, as it would enable medical students and nurses to become familiar with such cases and the best methods of treatment. This plan has been tried with the most happy results in Glasgow. In Germany this has been carried to a much greater length and there are many psychiatric clinics. In the United States, France, Italy, Austria and Switzerland it has been found to work well where tried. By this method a very large percentage of cures could be effected in cases that would otherwise likely pass over the border line and become insane.

TOXAEMIA OF PREGNANCY.

Dr. Kennedy McIlwraith, of Toronto, read a paper under this caption, dealing with his experience in twenty-three cases of eclampsia. Premonitory symptoms occurred in every one of the cases. These symptoms were headache, oedema, vertigo, drowsiness, ringing in the ears, albuminuria, visual defects, high tension pulse, severe epigastric pain, jaundice and haemorrhage from the gums. Of these symptoms oedema was noted in 13, headache in 12, albuminuria in 9, and high tension pulse in 5.

The treatment is based on the view that the convulsions are due to a toxæmia. If the patient is conscious give 5 grains of colomel, washed down with two ounces of a saturated solution of magnesium sulphate. The patient is now anaesthetized and one pint of sterile normal saline injected under each breast. An enema of one ounce of saturated of mag-sulph., two ounces of glycerine, and three ounces of water is given as high up as possible. As the patient comes out of the anaesthetic, a hypodermic injection of morphia sulph. grain $\frac{1}{4}$ is given. Chloral hydroate per rectum and grain 1-4 morphia sulph. are given every two hours alternately, as may be required, but not more than three grains of morphia should be given in twenty-four hours. If the patient is unconscious the same treatment is followed, except that the medicines by the mouth cannot be administered.

It is remarked that the convulsions may cease when the bowels are going to move. This is likely due to the exudate of serum into them relieving the system of toxins. *Veratrum viride* has proved useful. In one case of post-partum convulsions that would not yield to any other method of treatment, a hypodermic injection of 20 minims of the fluid ext. was immediately effectual. This remedy should only be used when the tension is high and the pulse strong. An injection of 5 to 10 minims three times a day would be safer.

If all these methods fail, and if labor should be accomplished and if labor is in progress and the cervix taken up, it should always be proceeded with. In cases where the cervix is not taken up, it may be dilated manually. In all cases water should be given, and, if unconscious, by the bowels.

With regard to the use of chloroform, the writer warns the profession regarding its danger. During the clonic stage of the convulsions, the patient may get too much of it. In all cases, oxygen is urgently needed, and chloroform prevents the blood getting oxygen. The only use chloroform should be put to is to break the series of convulsions while other means are effecting elimination.

Profound coma, a rapid feeble pulse, or a pulse of high tension are of bad omen. When the circulatory balance is well maintained and consciousness is regained between the convulsions the outlook is better. Care should be given pregnant women, and more attention paid to the condition of the kidneys and eliminatory channels generally than is the case too frequently.

HOME TREATMENT OF PULMONARY TUBERCULOSIS.

Dr. Edward Playter continues the discussion of this important topic from a previous issue. He again emphasizes the importance of chest expansion. It is of the utmost moment that all the healthy lung be increased in breathing capacity, in order that more oxygen be obtained. Unless this chest expansion can be secured, cases in the second and third stages cannot recover. In beginning the necessary chest exercises care, however, is necessary.

Cough may be lessened, though never stopped, by inhaling some simple essential oil, or soothing medicament, such as eucalyptus, menthol, tr. benzoini co., etc. The simplest form of inhaler is a small bottle with two glass tubes passing through the cork, one of the tubes dipping into the liquid.

Intra laryngeal injections are helpful. Oil of cinnamon, creasote, iodoform, etc., in proper strengths may be used for this purpose. Ozoniz-

ed air has been tried by the writer to some extent, but the results have not been very encouraging.

The morning tonic bath is of much value in treating consumptives. It promotes healthy, vigorous action of the skin and assists in preventing taking cold. It must not be too cool to prevent good after-reaction. After a time the patient can bear a lower temperature. The general conditions of the patient should be the guides and not the temperature of the body. The inunction of cod liver oil at night is recommended. Every organ in the body must be put in the best condition possible. In early cases little else may be required than more oxygen with rest, and the use of some counter irritation as the inunction of iodine. No two cases can be treated alike, and special attention must be given to each patient.

The Dominion Medical Monthly. April, 1905.

COCAINE ANAESTHESIA.

Dr. Ingersoll Olmsted, of Hamilton, contributes an address upon this subject. When in Berlin in 1894, Dr. Olmsted visited Schleich's clinic and saw him do major operations under infiltration of the tissues by very weak solutions. During the past few years the writer or the paper has used weak solutions of cocaine in a variety of operations, and with satisfactory results. Local anaesthesia is useful for those cases where a general anaesthetic is contraindicated, and it avoids the unpleasant after effects of bronchitis or pneumonia that may follow the inhalation of an anaesthetic. At first much too strong solutions were employed and poisoning sometimes resulted. It can be used in patients that could not bear a general anaesthetic.

Considerable emphasis is laid upon the method of giving the injections to insist that they should be intradermal and not hypodermic. It has been found that weak solutions produce anaesthesia as well as strong solutions. The solutions should be isotonic, that is, its specific gravity and freezing point should be the same as the tissues. Plain water injected causes pain, whereas normal saline solution does not do so.

To avoid the toxic effects of cocaine some tried other drugs, and Eucaine was used. It has nearly as marked analgesic properties, but the effects passed rather quickly. This can be avoided by adding some adrenalin, which contracts the small vessels, retaining the cocaine or eucaine longer in the part. Barker's formula is as follows:

Distilled water 100 c. .c. m. (3½ ounces).
 B eucaïne 0.2 gram. (3 grains).
 Sodium Chloride 0.8 gram. (12 grains).
 1 pro mille adrenalin chloridem. 10.

The whole quantity may be used at one operation, and even twice as much has been used without toxic effects. Dr. Barker waits for thirty minutes after the injections before he operates. Dr. Olmsted has used the B eucaïne, but prefers the weak cocaine solution.

Schleich's solution is :—

Cocaine hydrochloratis 0.1 gram.
 Morphinae hydrochloratis 0.02 gram.
 Sodii chloridi 0.2 gram.
 Aquae destil, ad. 100 c. cm.

If a few drops of a cocaine solution be injected into a nerve, the part supplied by the nerve is rendered analgesic. Advantage has been taken of this fact in performing the operation for hernia, by injecting the ilio-hypogastric, the ilio-inguinal, and the genito-crural nerves. The peritoneum will require to be infiltrated, as it is usually very sensitive.

Abdominal operations can be performed under local anaesthesia by cocaine. In doing these operations the tissues must be handled gently or there may be a good deal of pain caused. In breaking up adhesions and in tying vessels, it is well to infiltrate a little of the solution. The parietal layer of the peritoneum is very sensitive and requires special attention to be rendered analgesic.

This form of anaesthesia is particularly useful in operations about the neck. For operations on the larynx a five per cent. cocaine and antipyrin and one per cent. carbolic acid solution to paint the mucous membrane with will render the parts analgesic and allay cough. A hypodermic injection of morphia a short time before the operation is helpful.

Cocaine solutions will stand sufficient boiling to render them sterile. Dr. Olmsted has performed sixty major operations under local anaesthesia, including gastro-enterostomy, enterostomy, suprapubic cystotomy, colotomy, appendiceetomy, hernia, ileus, exploratory laparotomy, partial laryngectomy, goitres and tumors of the neck.

LYMPHO-SARCOMA.

Dr. Beverly Milner reported this case to the Ontario Medical Association. The doctor believes in a radical operation, if it can be done

sufficiently early in the disease to be likely to prove thorough. The patient, whose case was reported, was 19 years of age. The disease began in the left supra-clavicular glands. The glands were removed by operation on 7th January, 1904. Diseased glands found in the mediastinal space at the time of the operation. The microscope revealed a large round-celled sarcoma. Coley's fluid was employed daily and the x-ray every second day. The Coley's fluid was increased from two minims to sixteen minims by the hypodermic method. The x-ray treatments lasted 15 minutes. The glands in the chest continued to enlarge and others became affected. Coley's fluid was finally discontinued; but the x-ray treatment was kept up every alternate day.

The treatment was changed to quinine internally and the x-ray externally. Quinine bisulphate was given in 15 grain doses an hour before the raying. The raying was done by means of a very high vacuum tube at a distance of three feet, and an exposure of 45 minutes. Under this treatment there was considerable improvement in the condition of the glands and the patient's general state. A pericarditis developed and the patient died.

The history of this case showed that Coley's fluid had no effect on the disease, or at least not of any beneficial nature. The raying as at first used was also of no value. Benefit was obtained from the combined treatment with quinine and the x-rays.

Burns should be avoided as much as possible, as they delay the treatment. With the aid of quinine fluorescence the danger of burns is very slight and the patient may have daily exposures of 45 minutes safely.

HYSTERECTOMY FOR FIBROID TUMOR OF THE UTERUS.

Dr. A. Laphorn-Smith reports an interesting case of hysterectomy for a uterine fibroid. Although the condition of the patient was greatly reduced from excessive haemorrhages, it was decided to attempt the removal of the uterus. Dr. Laphorn-Smith takes a serious view of these tumors. Formerly they were treated on the expectant plan or with drugs and electricity, but opinion has been changing of recent years, and they are now much more frequently removed. He does not believe in waiting for the menopause which in these cases does not come as expected. In cases where the flow does cease, the health suffers from the presence of the tumor and the pressure it gives rise to, so that these women usually die comparatively young. Further, in some cases these tumors become malignant.

The tubes and ovaries ought to be removed also. The reason for this is that in nearly every case of fibroid tumor of the uterus, these structures are also diseased in various ways.

It is strongly urged that fibroids should be removed while they are small and as early in their history as possible, before the woman's health is run down by haemorrhages, before troublesome adhesions are formed, and before the kidneys become diseased through pressure. If this course were adopted the mortality would be very low, the writer having had only one death in forty operations.

In the case, the subject of these remarks, the operation took half an hour and the patient made a good recovery.

The Montreal Medical Journal, April, 1905.

REGENERATION OF THE AXONES OF SPINAL NEURONES IN MAN.

Such is the title of the paper by Dr. D. A. Shirres. His paper is based to a great extent upon personal observation. He remarks that the opinion is pretty generally held that the axones do not regenerate, and that experiments on monkeys, dogs, etc., have failed to show that regeneration takes place. Quite recently Dr. James Collier in *Brain* states that immediate suture of the spinal cord proves that regeneration is possible. Sir William Gowers is referred to as also mentioning a case where there was complete motor paraplegia, and that after a time there was considerable restoration of function. When the patient died some years afterwards, sections of the cord went to show that some regeneration of the axones had taken place. The reason is advanced that regeneration in the spinal neurones is prevented because they have no neurolemma sheath. Further, as these cases of transverse myelitis, or crush injuries to the cord have been regarded as very serious, but little has been for them surgically. The pressure may be removed, but if the cord is found to have been divided no attempt has been made to restore its continuity. In many cases operation has been deferred too long.

In some cases the pressure upon the cord may have been of only momentary duration, and no coarse changes are visible, but there must be some marked changes as there is paralysis. In other cases the pressure may have lasted a week or more. In the majority of cases of fracture dislocation and pressure in the cord, there is motor and sensory paralysis with increased reflexes. Dr. Shirres thinks that in these cases there is not transverse division of the cord, and that when such is the case there

is flaccid paralysis with loss of the reflexes, motion and sensation. In some instances of injury to the cord the reflexes may be at first retained, but later on lost owing to the extension of blood clot or such like to the lumbar enlargement and thus involve the lower neurones. In this way a paraplegia which at first retained the deep reflexes may become flaccid, with loss of the reflexes and atrophy of the muscles. The cell bodies of the neurones must receive nourishment and stimulation or they will undergo degeneration. Electricity is a valuable means of supplying the requisite stimulation by the employment of needle-electrodes placed in the muscles or nerves.

“The order of appearance of the motor and sensory paralysis in progressive lesions is practically constant in the large majority of cases. They are motor paresis and spasticity, increase of the reflexes, anaesthesia below with local hyperaesthesia, sphincter paralysis, thermo-anaesthesia, followed by flaccidity with loss of the deep reflexes, progressive lowering of the faradic excitability, muscular wasting and loss of the sphincter tone. Pain and temperature are always earlier affected, and to a greater extent than sensibility to touch.”

A very interesting case is reported. The patient was 48 years of age, and was brought into the Montreal General Hospital in the spring of 1902 suffering from a fracture dislocation of the 9th and 10th dorsal vertebrae. He was put under the care of Dr. G. E. Armstrong. The writer saw the case with him. There were found complete loss of motion and sensation, flaccid paralysis, loss of superficial and deep reflexes, and bladder and rectal retention. Twenty-four hours after the injury, Dr. Armstrong cut down upon the cord and found that it was completely severed and the portions separated by at least half an inch. The case was regarded as hopeless. The lower portion of the cord and the motor roots from it were tested, and found to respond well to the electric current. This proved the lumbar enlargement was not injured. At the end of six months there was no return of the reflexes nor any sign of spasticity. This very clearly proved the view held by Bastian and some others that total transverse lesion destroyed the reflexes, and caused flaccid paralysis, and that the loss of the knee jerk and the flaccid state is due to removal of the higher centres and not to any concomitant injury of the lumbar enlargement.

At the end of eleven months, the cord was cut down upon again, when it was found that its two portions were separated by one and a half inches. The dura mater was opened and three inches of the spinal cord of a dog inserted. A few fine stitches united the pia-arachnoid of the one to the other. The dura mater was then closed, the patient making a good recovery from the operation. The fifth week after the operation the patient could recognize flatus in the lower portion of the abdomen.

Six days later he could feel the passage of a catheter, and ten days later could inform the orderly that the bowels were going to move. About the same time he began to feel the sensation of pins and needles in his feet, and in two months from the operation he could describe sensations up to the knees. There was slight reaction restored in the muscles to percussion. An abscess formed in the right kidney causing the death of the patient.

A very careful study was made of the cord. There was the typical ascending degeneration in the upper portion of the cord in the columns of Goll and Burdach and in the direct cerebular tracts and in Gower's tract. In the substance lying between the portions of the cord there were fibres found and uniting with the cord above and below. There were clear indications of regeneration. He does not assert that the dog's cord caused the improvement, but the nerve fibres were present uniting the two segments of the cord. A number of pathologists who saw the specimens were of the opinion that regeneration was taking place. This paper is one of very great interest and marks a stage in the onward progress of neurology, as it goes a long way towards establishing two important facts. That complete destruction of the cord causes loss of the reflexes and a flaccid condition of the muscles, without their being a coincident injury to the lumbar enlargement; and that regeneration of spinal axones can occur.

CAESAREAN SECTION.

Dr. H. L. Reddy has a paper based on six cases of Caesarean section. The usual preparatory treatment for a laparotomy was adopted, and the anaesthetic used in all cases was alcohol, chloroform and ether. The incision was made in the middle line, from two and a half inches above to three and a half inches below the umbilicus. A 10 per cent. solution of gelatine stopped all bleeding. The left flank was well depressed and pressure over the right side of the fundus aided by one hand over the fundus uteri, brought the uterus outside the abdominal cavity. The bowels were kept back by means of hot towels, and the uterus was covered by the same. The uterus was then opened from the level of the Fallopian tubes down to the contractile ring, or an incision of six inches. The wall of the uterus was cut through rapidly, and in five cases also the placenta. The bleeding was not severe in any case. The presenting part of the child was seized and it was delivered, the cord being clamped and cut. Aseptic ergot was injected subcutaneously into the nuttock and the Esmarch bandage relaxed. The uterus at once contracted and there was no difficulty in removing the placenta and membranes, except in one case.

The os was ascertained to be patent for drainage, and the opening in the uterus was closed by interrupted sutures one-quarter inch apart of No. 4 braided silk. Lambert sutures were used to bring the peritoneum together. The peritoneal cavity was dried out and filled with saline solution. The abdominal wound was closed by three layers of sutures, a continuous cat-gut for the peritoneum, interrupted silk for the musculo-aponeurotic tissues, and interrupted silkworm or horse hair for the skin.

In any case where it was thought necessary to render the patient sterile the Fallopian tubes were tied in two places and cut between.

In the first case both mother and child were saved and did well. In the second case the child did well, but the mother, who was very delicate, died of heart failure on the third day. In the third case, the mother made an excellent recovery, but the child died on the twenty-third day. The fourth case did well. the mother being able to nurse her child, when both left the hospital. The fifth case was also satisfactory to mother and child, both doing well. Case six was favorable to both mother and child. Only one case was not rendered sterile by trying the Fallopian tubes. In one case the membranes were very adherent and difficult of removal.

Under absolute causes, the writer mentions tumors that obstruct the descent of the child, and contracted pelvis, varying from three to three and a half inches. Relative causes for section may be found in very protracted labor. As the death rate should be nil to both mother and child, Caesarean section should not be left as the *dernier ressort* that is too often the case.

EMPYEMA OF THE FRONTAL AND ETHMOIDAL CAVITIES.

Dr. Robert H. Craig reports a case of empyema in these cavities. He removed the anterior half of the middle turbinal and freely opened the ethmoidal bulla and anterior group of cells. The cavity was curetted and flushed with an antiseptic solution. A few days later the frontal sinus was opened. An incision was made in the interfrontal furrow, and a small button of bone removed, midway between the supra-orbital notch and the midline. The cavity was found to contain granulation tissue. It was curetted and flushed with 1 in 5,000 bi-chloride solution, and then swabbed with bi-chloride of zinc, 40 grains to the ounce. The naso-frontal duct was enlarged and curetted and a gauze drainage inserted. At the end of two weeks the naso-frontal duct was enlarged to secure very free drainage as the progress of the case was not satisfactory under antiseptic solutions daily. The case recovered in one month. The writer recommends that in empyema of the frontal sinus free drainage be es-

tablished between the nasal and frontal cavities, before the external route be resorted to. All growths in the way should be removed, and the excision of the anterior half of the middle turbinal will facilitate the treatment of the naso-frontal duct.

INJURIES TO THE HEAD AND FACE FROM FORCEPS.

Dr. Ridley Mackenzie describes three cases of children, in whom injuries had occurred from the use of forceps during labor. These children died in the hospital and, therefore, autopsies were possible. In the first case there was a large purplish swelling, not tense nor pulsating, over the parietal region. There was fracture of the skull, but no injury to the brain. The tumor was due to haematoma of the pericranium. The second case presented two tumors over each parietal eminence. The autopsy showed that these were haematomata of the pericranium, but there were no fractures nor injuries to the brain. The third case presented a large swelling over the right side of the head. There were paralysis and wasting of the muscles of the right side, and conjunctivitis and keratitis. The autopsy revealed a pericranial haematoma and an underlapping of the right parietal bone. The facial nerve was flattened, no injury of the brain was noticed.

The injuries usually met with after the forceps are "intracranial effusions of blood, paralysis of the facial nerve, depression and fissure of the skull, pericranial haematoma, laceration of the scalp, injuries to the eyes, ears, nose and mouth."

To favor the absorption of haematomata cold and pressure should be employed. If the blood has not absorbed by ten days, the tumor should be opened and drained. Fractures are left alone, and injury to the facial nerve treated by time, electricity and protection of the eye.

HYDROSALPINX, A CASE REPORT

Dr. F. A. L. Lockhart reports this case from the Montreal General Hospital. The patient was 22 years of age. She came into the hospital complaining of weakness, vomiting after eating, and of being sore all over her stomach. Four years ago some abdominal operation performed for pelvic trouble, but the exact nature of this could not be ascertained. The tube was reached through an abdominal opening. On removal its wall

was found to be very thin and tense and enormously distended with fluid. At its largest part it measured 13 by 15 inches. The pedicle measured 2 by 8 inches.

JOHN HUNTER.

This is the subject of Dr. W. W. Chipman's article. He covers the main points in the life of the man who may be truly called the founder of scientific surgery. John Hunter's was a remarkable career. He was endued by nature with rare gifts and he allowed none of many talents to remain dormant. The sixty-five years given to John Hunter from 1728 to 1793 were eventful years for surgery and science in general. His vast collection contained 14,000 specimens and had cost him over £70,000. For this he had always slaved and sacrificed and kept himself poor. It was bought by Pitt for £15,000 and handed over to the College of Surgeons.

Hunter's day began at six in the morning. He worked at his dissections till nine, when he had breakfast. He then saw patients till noon. From then till four he spent on his rounds or at the hospital, returning for dinner. He now took an hour's sleep and spent the rest of the day making notes and observations of his cases, preparing and delivering lectures, and reading till one or two in the morning.

He was a voluminous writer and among these may be mentioned "The Natural History of the Human Teeth," "A Description of the Situation of the Testis in the Foetus and its Descent into the Vesiculæ Seminales," "On the Structure of the Placenta," "Observations on Digestion," "On the Color of the Pigmentum Nigrum of Different Animals," "The Use of the Oblique Muscles," "A Description of the Nerves which Supply the Organ of Smelling," "A Description of some Branches of the Fifth Nerve," "A Treatise on Venereal Diseases," "Observations on Certain Parts of the Animal Economy," "A Treatise on Blood, Inflammation and Gun-shot Wounds."

Hunter will ever be remembered by his work on the Treatment of Aneurism by Proximal Ligature, his work on phlebitis, intussusception, gun-shot wounds, feeding through a stomach tube, and healing by first intention. The surgery of the middle ages was a trade; Paré, Petit and Pott converted it into an art; but Hunter elevated it into a science. Hunter was a great philosopher. He was the first to teach and practise surgery as a branch of the science of life. He placed surgery on a firm scientific basis. Indeed, all medicine is richer because of the life work of John Hunter. Sixty-six years after his death his remains were removed from St. Martin to the Abbey, the worthy resting place of Britain's wor-

of whom he ranks as one of the greatest. The Royal College of Surgeons placed over his grave in the Abbey a tablet recording "its admiration of his genius as a gifted interpreter of the divine power and wisdom at work in the law of organic life, and its grateful veneration for his services to mankind as the Founder of Scientific Surgery "

The Maritime Medical News, April, 1905.

DUALITY OF MIND.

This is the title of Dr. Geo. L. Corbet's address. His paper is based to some extent on the practice of psycho-therapy as he saw it carried out by Dr. Sahler, of Kingston, N.Y. He points out that a working hypothesis is requisite in the studying of scientific subjects. The views of Mesmer, Dod, Braid, The Nancy School, The Paris School, etc., are referred to. The researches of Liebault and Bernheim are stated as the best theory yet advanced to explain the working of our mental processes. This hypothesis briefly stated is that man's mental organization is dual in its nature. Man has an objective and a subjective mind. The subjective mind is amenable to control by suggestion. The subjective mind is incapable of inductive reasoning. The objective mind takes cognizance of the objective world, and its media of observation are the five senses. It is the outgrowth of man's physical necessities and is the guide in his struggles with his environments. Its highest function is reasoning. The subjective mind takes cognizance of its environments by means independent of the senses, or in other words it perceives by intuition. It is the seat of the emotions and the storehouse of memory. It performs its highest functions when the objective senses are in abeyance. The objective mind appears to be a function of the brain, while the subjective mind is a distinct entity, possessing independent powers and functions.

The objective mind in its normal condition is not controllable against reason, positive knowledge, or the evidence of the senses by the suggestion of another. The subjective mind, in the hypnotic state is amenable to such suggestions from another. These two minds are separate and possess separate powers and functions. It follows that the subjective mind is amenable to suggestions from the objective mind as well as from the mind of another person, and the condition of auto-suggestion is established. The objective mind is capable of deductive and inductive and of analytical and synthetical reasoning, while the subjective mind is incapable of inductive reasoning. The subjective mind cannot reason from facts to principles but only from principles to facts.

These two minds should be developed harmoniously. If the subjective mind usurps control reason is dethroned. In cases where the objective mind is deranged, wrong suggestions are made to the subjective mind and various mental states, such as that of the mono-maniac result. When the subjective mind becomes active and the objective is in abeyance, such instances as those of wonderful memory occur, where a person will speak in a language not supposed to have been learned. The highest equal development of the two minds constitutes genius.

It is the influence of one or other of these minds over the other of these minds or upon the body that explains the problems of suggestion and auto-suggestion. These theories of man's mental nature seem to explain all the conditions.

THE RESIDUUM.

George W. T. Irving has a very carefully prepared paper upon the important subject of the lower grades of humanity in civilized communities. These he calls the poor, the unfit, and criminal; incapables in a word, or those who, for some reason, have been forced down in the struggle for an existence.

The two great factors in the production of the submerged are heredity and environment. The first fixes the organic characteristics of the individual, the latter affects modifications in that heredity. Heredity furnishes the elements of character derived from the parent; environment all the conditions after birth that help to shape our careers. It is necessary to try to fix the share of each of these in the causation of the pauper and the criminal. This residuum or lower grade must be recognized as a diseased portion of mankind.

A distinction is drawn between poverty and pauperism. The person should not be called a pauper so long as he maintains himself, however, poor he may be. When he gives up the struggle and throws himself on the charity of others he becomes a pauper. The evil effects of overcrowding are considered at some length. By it the health is impaired and the earning power reduced thereby. This leads to other disastrous consequences, such as drink and crime.

It has been noticed lately that a large percentage of those seeking admission into the British Army were rejected because they did not measure up to the required standard. Insufficient food, overcrowding and wrong methods of living account for this degeneration in the race. The duty of the state is to take these matters into consideration, and devise ways of lessening the numbers who sink into the grade of paupers and criminals by controlling their causes.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

THE TREATMENT OF CHRONIC RENAL DISEASE.

Sir John W. Moore gives as the prime causes in the production of chronic parenchymatous nephritis, intemperance and exposure to cold and wet. The cases of chronic interstitial nephritis are usually the result of chronic plumbism in house painters and plumbers, while alcoholism also plays its part. Treatment of chronic kidney disease should proceed on three main lines, viz., dietetic, eliminative, and cardiac. The kidney should be kept flushed by soft water. Nitrogenous food should be given sparingly, but the patient must not be allowed to suffer the pangs of starvation or waste for want of it. Milk is well borne in many cases, as are the lighter animal broths. When patients dislike a "slop-diet," white meats and white fish may be allowed. Copious draughts of soft water will assist elimination through the kidneys. Special attention must also be paid to the skin, bowels, and lungs. The open air treatment is indispensable in dealing effectively with chronic renal disease. Overexertion should be avoided, however. The physical state of the heart and circulation is the paramount factor in the prognosis of chronic renal disease. The indications for treatment are to strengthen and aid the left ventricle in its work, to relieve tension in the right ventricle, and to bring high arterial tension down toward the normal. Digitalis is the best cardiac tonic. If an iodide is given with it, the objection of increased arterial tension caused by the digitalis alone may be met. If the drug is given with effervescent citrate of caffeine, it will not nauseate. A full dose of a saline laxative will relieve the pressure on the right ventricle. Arterial tension, if very high, must be gradually reduced by laxatives, the various nitrites, the iodides, and a restricted diet. The writer speaks, in closing, of the administration of macerated pork kidneys. Excellent results have been claimed for this method of treatment, but the writer has had no very definite or satisfactory experience with it. He urges physicians never to despair in a case of chronic nephritis, for recovery is not impossible.—*The Dublin Journal of Medical Science.*

APLASTIC ANAEMIA ASSOCIATED WITH LYMPHOID HYPERPLASIA OF THE BONE-MARROW.

In *The Johns Hopkins Hospital Bulletin*, April, Dr. Blumer reports a case comparable to those Ehrlich described in 1888, as aplastic anaemia, though it is atypical in many respects. As the name indicates there is a lack of evidence in the blood of any attempt on the part of the bone-marrow to compensate for the loss of blood corpuscles; the picture presented by the peripheral blood is that of a progressive loss of red corpuscles, without any marked variation in the size or shape of the cells, and without the presence of nucleated reds. The case reported is of a peculiar type in which the bone-marrow shows, instead of the simple aplasia that would be expected, a hyperplasia of the mononuclear elements; but was complicated by the fact that only in some regions was this hyperplasia present. An explanation founded on the hyperplasia also as suggested by Senator, is that the lymphoid cells, which have undergone hyperplasia, represent the parent cells from which are derived both the red cells and granular leucocytes. It is plain that if these cells fail to go through their normal cycle of existence and, instead, undergo proliferation unchanged, neither red cells nor granular leucocytes would be produced.

The case reported was a laborer, who was admitted to the hospital suffering from general weakness and shortness of breath. He had suffered from haemorrhages from the rectum and attacks of vomiting for over a year. He was well developed and moderately well nourished, with a yellow pallor, and showing little else except a slight enlargement of the lymph-nodes. The blood showed a few macrocytes, a moderate number of microcytes and a poikilocytosis. Occasional red cells showed granular degeneration and nucleation; the prevailing type of leucocyte was the small mononuclear, and 80 per cent. of these were typical lymphocytes. Temperature ranged over 100 degrees F.

The patient died thirteen days after admission, and an autopsy was performed three hours after. The lungs showed marked emphysema, and some areas of oedema, hyperaemia, and consolidation, the fatal termination being due to broncho-pneumonia. The lymph-nodes were slightly enlarged and dark red in color. The bone-marrow, in the upper part of the right tibia, was yellow and fatty. Histologically, many of the organs showed atrophy and degeneration. The marrow from the tibia consisted almost entirely of fat, that from the lower end of the femur and from the vertebrae showed marked lymphoid hyperplasia with an almost complete absence of nucleated reds and granular leucocytes.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.

Chief Surgeon Canadian Pacific Railway, Ontario Division ; Surgeon Toronto Western Hospital.

THE ABUSE OF THE CYSTOSCOPE IN PROSTATIC DISEASE.

In the *Medical Times*, January, 1905, G. Frank Lydston states that in certain posterior median enlargements and where prostatic overgrowths are jutting into the cavity of the bladder the use of the cystoscope is essential to establish the diagnosis, but where the symptoms of prostatic obstruction are apparently typical and the catheter demonstrates a marked increase in the length and a change in the form of the prostatic urethra with the presence of residual urine, the cystoscope, even in some of the exceptional cases, is unnecessary and unequivocally dangerous.

Lydston formulates the following rules in regard to the use of the cystoscope in cases of prostatic obstruction:—

1. That when the diagnosis of prostatic obstruction is clear, the indication for radical operation is also clear, the application of this statement being modified only by the conditions governing the individual case.

2. Any exploration of the bladder which is unnecessary to the establishment of a practical working diagnosis is not only useless, but exceedingly dangerous.

3. Cystoscopy is especially dangerous, and where not absolutely necessary, is especially to be avoided because of the traumatism, and subsequent danger of infection which the insertion of the instrument necessitates, and the frequent necessity of anaesthesia with prolonged exploration of the bladder.

4. The use of the cystoscope, especially when anaesthesia is employed, rapidly compounds the immediate danger to the patient, and the subsequent danger of operative procedures.

5. A properly performed radical operation is much less dangerous than a cystoscopic exploration.

6. The use of the cystoscope rarely accomplishes more than the gratification of the curiosity of the operator in the establishment of refinements of diagnosis.

7. So far as the diagnosis of stone is concerned, the use of the cystoscope is superfluous. Whether the presence of stone be established or not, a radical operation for the removal of the prostate is necessary. The stone can be removed at the same time.

8. There are exceptional cases of posterior median obstruction and of prostatic overgrowths at the neck of the bladder in which the cystoscope is necessary. These cases are safer for exploration than the orthodox type of prostatic obstruction, but even in them diagnosis can usually be established without the cystoscope, and where this can be done the use of that instrument should be avoided.

THE SURGICAL TREATMENT OF GOITRE.

In the *Kansas City Medical Record*, February, 1905, E. Von Quast discusses the above subject. The procedure and the operation depend entirely upon the condition of the patient and the class of goitre present. It is essential that the operator should have full knowledge of the anatomy of the region, and the operation should be performed with the utmost care.

Of the various operations suggested, extirpation with perfect technic and asepsis has given the best results. Enucleation does not require such exact technic but is more dangerous on account of the increased tendency to haemorrhage and recurrence. In order to obtain the best results, the following rules should be observed:—

First—All antiseptics should be avoided, but a perfect asepsis in the preparation of the field and details of the operation carried out.

Second—Great care in the selection of the anaesthetic. Kocher and Roux used local cocaine anaesthesia, and only the ether air mixture in nervous and excitable patients and with healthy heart and lungs; they attribute the excellent results partially to this, thus avoiding the dangers of suffocation in the earlier stages of anaesthesia, like nausea and vomiting which is one of the disagreeable consequences of the general anaesthetic, and so liable to produce venous congestion, especially aspiration or deglutition pneumonia.

Third—Large incisions in correct lines, such as Kocher's symmetrical collar incisions, which leave the least objectionable scar and allow an inspection of the goitre. In some cases a left or right angular incision is preferred for the better exposure of the goitre.

Fourth—Careful ligation of all main arteries and veins—as the arteriae and venae thyroidiæ, superior and inferior, and imae and venae accessoriae. Thus alone can we succeed in removing the goitre with the least amount of loss of blood during the operation, carefully guarding against injury of the recurrent laryngeal nerve and secondary haemorrhage.

Fifth—All the muscles and other divisions, especially the thyroids, should be carefully protected against injury, because the neck would be badly scarred by subsequent atrophy. The incisions between the muscles should be vertical. If necessary, separate the muscles from their upper insertion and reattach after the removal of the goitre.

GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynecologist Toronto Western Hospital ; Consulting Surgeon Toronto Orthopedic Hospital.

PREGNANCY COMPLICATED BY TUMORS OF THE UTERUS.

Dr. D. S. Fairchild, *An. of Gyn. and Ped.*, November, 1904, says that the dangers from tumors of the uterus complicating pregnancy may arise during gestation, labor, and after delivery. Treatment will vary during pregnancy according to the stage of gestation and the surgeon will be required to determine on either a conservative course, abortion, or supra-vaginal hysterectomy. Individual conditions and circumstances must be considered in every case before reaching a conclusion. If there is reason to suspect that the tumor is undergoing degenerative changes or suffering from a torsion of the pedicle hysterectomy should not be delayed. But these accidents are not common.

The discovery of a tumor complicating pregnancy is no certain indication for an operative procedure of any kind, but a watchful care should be observed and when it is found in the first four months that the uterus cannot rise in the abdominal cavity or that an abortion is imminent the abortion should be left to nature or a supra-vaginal hysterectomy done, but an abortion should not be induced.

Unless grave pressure symptoms are produced by the uterus rising in the abdominal cavity no interference should be made. With such symptoms a supra-vaginal hysterectomy may be made.

If cervical tumors threaten to interfere with delivery the question of removing them may be considered at about the seventh month.

In most cases the patient will go on to labor and be treated according to indications present at the time. Such cases may be delivered spontaneously or require a Caesarean section or a Poro operation.

GYNÆCOLOGICAL SUPERSTITIONS.

At the recent meeting of the Pan-American Medical Congress at Panama, Dr. Lucy Waite, of Chicago, read a paper on this subject, declaring them to be hard to overthrow. One of the first superstitions is that the uterus has a normal position. It has not, but may lie in any position. A second is that retrodeviation of the uterus is the cause of constipation. This is not so, as it cannot be proved either by dissection or examination. She has analyzed 500 cases, but could not trace constipation to posture of the uterus alone; the uterus was found in anteroposition in 60 per cent., in retroposition in 40 per cent.; of the antero-

positions, 52 per cent. gave a history of constipation, while 48 per cent. did not; of the retropositions, 66 per cent complained of chronic constipation, and 32 per cent. had normal bowel movements. The third is that backache is a symptom of retrodeviation. She regards this as nonsense, as 1,000 cases examined disproved that superstition. The fourth that flexion or stenosis is the cause of dysmenorrhea. This is not so, nor is childbirth the only cure. Of 300 cases where the question was asked: "Have you had more or less pain since the birth of your children?" the answer of 135 was, "more pain," of 89 "less pain," and of 76 "no difference." Some of these 76 had no pain before or since childbearing. Of the 135, some had no pain before childbearing. Many women had suffered worse after childbirth than before. She believes that the mania for operating in certain cases ought to be checked on the death of these superstitions.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS, M.D., Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal.

GLYCOSURIA IN PREGNANCY.

J. M. Jackson and J. R. Torbert, *Boston Medical and Surgical Journal*, February 9, 1905, give short histories of four cases of glycosuria in pregnancy. Three were primipara and one a multipara. In one labor was induced, while the others went to full term. In the first case the amount of sugar never reached one per cent, and the patient's general condition was good. Labor was normal. In the second case labor was induced at the 6th month on account of peritonitis and there being four per cent. of sugar present. These both disappeared soon after the uterus was emptied. In the third case four per cent. of sugar but no symptoms were present. She was put on strict diabetic diet, and in one month was sugar free. Labor was slow, accompanied by high tension pulse and headache. Inertia set in and the os was dilated and forceps applied, the head being low in the pelvis. The placenta was adherent and was removed piecemeal. One hour later collapse set in and the patient died.

The fourth case was delivered by pedalic version on account of haemorrhage. Shock followed delivery and the patient died in coma.

The authors give a review of the literature and conclude that a temporary glycosuria frequently exists during the later months of pregnancy, which is usually due to glucose or lactose and is physiological and does not interfere in any way with the pregnancy.

Where glycosuria exists due to glucose in variable amounts, associat-

ed with other symptoms of diabetis, and when diacetic acid or acetone appears in the urine the interruption of pregnancy is advisable in the interest of the mother.

Anaesthetics should be avoided in these cases on account of the tendency to sudden collapse.

VAGINAL CAESAREAN SECTION.

Simon Strauss, *Med. Record*, March 18, 1905, after citing the objections to abdominal caesarean section, gives the following technique for the performance of the vaginal operation:—

“The patient is anaesthetized and disinfected, as for vaginal hysterectomy, the cervix is grasped with two vulsella forceps and steadied, and a longitudinal incision is made in the anterior vaginal wall from 2 to 3 c.m. below the meatus urinarius and extended as far as the external os. The bladder is then peeled off from the cervix and lower uterine segment, and an incision is made in the middle line from the external os up to the peritoneal reflection, but the peritoneal cavity is not opened. The two vulsella forceps have meanwhile been removed, and two stout sutures are introduced to steady the uterus, one on each side of the anterior incision. An incision is now made in the posterior vaginal wall, about 3 c.m. from the external os, and Douglas' cul-de-sac is peeled from the posterior wall of the lower uterine segment without opening the peritoneal cavity. The cervix is then incised posteriorly, from the external os about 4 c.m. in length. The membrane are then seen to protrude, a foot is grasped, version is performed and the child extracted. After delivery the cord is cut short and a large pad introduced to keep the field clear for repairing the uterine wall. The placenta is expressed or piecemeal removed. The incisions in the uterus should be closed with interrupted sutures, and the vaginal wall closed with continuous sutures.” The uterus should not be packed till after the placenta has been expressed, as has been recommended by Dührssen.

The case reported by the author was operated upon for cicatricial stenosis of the cervix. Though the case was septic at the time of operation, hence precluding the possibility of successful operation by the abdominal route, she made an uneventful recovery in two weeks.

The operation can be completed in from 10 to 20 minutes, hence it is indicated in cases of eclampsia with rigid cervix.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., Professor of Ophthalmology and Otology, Medical Faculty, University of Toronto.

THE EARLY TREATMENT OF STRABISMUS.

In the *Virginia Medical Semi-Monthly* for February 24th, 1905, Dr. Oscar Wilkinson, of Washington, D.C., discusses the modern methods of dealing with squint. He says that the works of modern oculists have so modified our ideas of strabismus that to-day we enter upon its treatment with the same confidence, in cases seen early, as the surgeon goes to a case of simple fracture. The scientific method was introduced by Donders and Helmholtz in 1860, and perfected by others. The pernicious advice of many general practitioners to "wait and the child will outgrow it" could not fail to have evil results, and to this day exerts its influence upon the laity. "I hope that the day for such advice has passed," writes the doctor, "and that these cases will be sent to the specialist at the very beginning of their trouble." To-day the early treatment of strabismus is so successful and devoid of evil results that the man who advises his patients to neglect treatment does them an irreparable injury. If these cases are not seen until they are eight or ten years old, they are more or less amblyopic in the deviating eye and often without the power of central fixation. In early cases we get absolutely perfect results and without operation. What is the result of waiting? Granting that the deviation does at times decrease as the child advances in age, cures are not possible, so far as vision is concerned, in delayed cases. If the family physician will but make it clear to the parents that, if these little sufferers are taken early to the oculist, an operation will probably be avoided, it will be of great benefit to them. Holthouse found that 92 per cent. of cases seen early improved, and that 60 per cent. were cured by glasses alone. St. John Roosa believes that convergent squint depends almost wholly upon hypermetropia. Reber's statistics show that the average age at which squint appears is three years, and the average age at which they apply for treatment is seven years in private practice, and much later in hospital practice. Worth has shown that there is strong hereditary tendency to squint, and that out of 1,373 cases, 711, or 51 per cent., were hereditary. Jenson gives the percentage as high as 70. There is such a thing as spontaneous cure of squint, but they are very rare.

The first thing to be done is to paralyze the accommodation thoroughly by the use of atropine and correct the refractive error. The second step is to attend to the child's general health. The systematic exercises with prisms is often of great use by strengthening the muscles developing binocular vision.

THE DIAGNOSIS OF CEREBELLAR ABSCESS SECONDARY TO OTITIS MEDIA.

H. B. Robinson, F.R.C.S., in *The Antiseptic* for April, reports the case of a boy, aged 13, was admitted to St. Thomas' Hospital on May 27. Since an attack of measles, eight years before, he had had a foetid discharge from the left ear. For three weeks he had had pain in the ear and head. The discharge had stopped and there had been incessant vomiting and obstinate constipation. For the last two days he had been very drowsy. He had got rapidly thinner since the onset of his illness. On admission he complained of pain in the head which could not be specially localized. There was tenderness behind the left ear with some oedema over the mastoid but no discharge. The membrana tympani was destroyed and the tympanum was filled with granulations. The pupils were equal, reacting to light and to accommodation, the vessels of the fundi were rather full and tortuous, the edges of the discs were blurred, and the discs themselves were slightly swollen. The grip of the left hand was weaker than that of the right; the left knee-jerk was increased but the plantar reflexes were equal and normal. He tended to curl up on the right side.

A curved incision was made behind the pinna and this was drawn well forwards with a gauze retractor passed through the meatus. The mastoid antrum was opened with a gouge and pus escaped; the posterior wall of the meatus was taken away and the antrum and tympanum were freely thrown into one. The pus appeared to come from the posterior part of the antrum and from the groove for the lateral sinus. The groove was opened up and the sinus was exposed but this was not the source of the pus. In so doing the sinus was lightly lacerated and blood welled up freely, showing no thrombosis. The bleeding was easily controlled by gauze pressure. Further exploration showed that the pus was coming through the posterior wall of the antrum itself, just in front of the sigmoid sinus and it ran away freely on introducing the pus seeker. The opening in the bone was further enlarged when the underlying dura mater was seen perforated and the escaping pus pulsated a little and was very foul-smelling. A silver drainage tube was passed into the abscess cavity and packed round with gauze.

After the operation the temperature fell from 102.4 degrees to 99 degrees, and the patient was drowsy. On the 29th the morning temperature was normal, and there was nystagmus from left to right in both eyes. On the 31st he was conscious though somewhat dull; the nystagmus movements were of less frequency. On June 4 he was still somewhat apathetic and showed slight incoordination in finer movements, such as trying to button his jacket. On the 9th his mental condition was

improved; speech was indistinct; some nystagmus was still present; and the left arm was a little weaker than the right. On the 15th there was still perceptible weakness of the left arm, the nystagmus was almost gone, and both knee-jerks were rather feeble, but the left arm was the more forcible. Recovery followed.

The important points in the case are the evidence which enables cerebellar abscess to be diagnosed, and the drainage through the mastoid in front of the sigmoid sinus. The symptoms pointing to cerebellar abscess were weakness of the left upper extremity and increase of the left patellar tendon reflex on the same side as the lesion, and the tendency to curl himself up on the right side—on the opposite side to the lesion. These symptoms, with others, have resulted from the experimental removal of one lateral lobe of the cerebellum, as demonstrated by Luciani and Risien Russell, which observations have been confirmed clinically, especially in a case reported by Dr. T. D. Acland and Mr. C. A. Ballance. The weakness of the upper extremity on the same side as the supposed brain lesion would at once arrest attention and suggest its origin. Luciani considers this the result of the abscess cutting off from the opposite cerebral hemisphere the reinforced influence of the lateral lobe of the cerebellum. The fibres thus involved pass through the superior cerebellar peduncles, and an abscess in any part of the cerebellum which did not involve the course of these fibres should not produce the symptoms. The fibres of the superior peduncles are particularly related with the dentate nucleus, some being connected with its cells while others pass through it on their way from the cerebellar cortex. Should the lesion involve this portion of the cortex or the region of the dentate nucleus, there may be weakness of the upper limb or of both limbs on the same side as the lesion. It appears that the lesion must be deeply placed to the inner and front part of the lateral lobe, and in the present case the abscess was certainly in front and also deeply placed from the distance the tube went in. In some cases there is weakness of the lower limb on the same side as the lesion, but less than that of the upper.

The increase of the patellar tendon reflex on the same side as the lesion is also explained by the weakening of the cerebral influence. The tendency to curl up on the opposite side was noticed by Risien Russell in monkeys after removal of one lateral lobe, and clinically in cases described by Ballance, Deanesly, and Gamgee. Conjugate deviation of the eyes to the opposite side is not recorded, although it may have existed. It was obtained experimentally by Risien Russell and noticed in Acland and Ballance's case. Nystagmus was not noticed until the second day after the operation, and the movements were away from the lesions;

they should be to it. Perhaps it was due to some injury of the external semicircular canal at the operation.

X-RAY THERAPY AND SKIAGRAPHY.

Under the charge of JOHN McMASTER, B.A., M.D., C.M., Toronto.

THE PRESENT STATUS OF ROENTGEN RAY THERAPY.

R. H. Boggs says that much experience is necessary in applying the x-rays in order to get the therapeutic effect, as the various mechanical guides to the dosage are not always reliable. The use of the fluoroscope involves a good deal of risk to the operator even if but infrequently employed, while it is really practically useless except for the purpose of testing tubes and making minor examinations, and gives such untrustworthy results that it should be discarded. Sufficient evidence has accumulated to give the x-rays a place in the treatment of all forms of tuberculosis. While a large number of skin diseases are benefited by the application of the rays it is advisable to treat only the most obstinate in this manner, as trivial affections can be relieved by other measures with less expense to the patient. The author concludes by saying : (1) that the wide difference of opinion as to the value of the rays is largely due to the manner in which they are applied ; (2) that if the best interests of our patients are to be considered, the rays must be given a place as a therapeutic agent. (3) that injury to the operators from the rays during the past two years has been due to thoughtlessness or lack of familiarity with what is going on in the x-ray world ; (4) that in applying the rays it is essential to know the quality as well as the quantity of the rays absorbed, and that this must be varied to suit each individual case ; (5) that unless the operator has had a wide experience in the treatment of carcinoma, he should always consult a surgeon in each case, as it is certainly by the combination of surgery and x-ray that the best results are to be obtained.—*Medical Record*, May 6, 1905.

PROTECTION FROM ROENTGEN-RAY INJURIES.

C. L. Leonard, Philadelphia, *Journal A. M. A.*, May 6, calls attention to the serious risk that x-ray operators undergo, especially if they follow the practice advised of testing the qualities of the rays on their hands with the fluorescent screen. The only practical method is to limit their radiated field by covering the Crookes tube. For this purpose he uses a pasteboard box a little wider than the diameter of the tube and covered with x-ray lead foil a little heavier than the ordinary tea lead. This extends two inches below the bottom of the box, and can be ad-

justed so as to limit the field to any extent required. It is not necessary to cover the anode end, and the box is held on a bracket over the portion of the body to be treated; if a very small field is required, a local shield may also be employed. He thinks probably some effects are due to the strong induction field surrounding the coil which, especially in large hospitals, should be kept in another room, but with the controlling apparatus within the operator's reach. For the dermatitis of the operator's hands, he advises twice daily soaking in very warm water and scrubbing with Eichhoff's superfatted resorcin soap, followed by inunction of lanolin containing half an ounce of boric acid and a dram of resorcin to the ounce. For the acute erythema of x-ray treatment, he employs a stearate of zinc powder with 10 per cent. ichthyol, which he thinks acts as a prophylactic against severe burns. This should not be confused with stearate of zinc ointment, which may do harm.

UNIVERSAL CELESTIAL RADIO-ACTIVITY.

This subject was discussed recently by Prof. Monroe B. Snyder, director of the Philadelphia Observatory, before the American Philosophical Society. He has discovered radium in the solar photosphere, and radium emanations in the solar corona and in the auroral streamers of the earth. He also found that radium and its emanation, the latter identical with coronium, were widely and correlatively distributed in stars, nebulae and very probably comets. Radio-activity is a transformation of one element of higher atomic weight into another of lower atomic weight, with the release of light vibrations of characteristic intensities and wave lengths. Ramsay, Rutherford and Soddy had demonstrated the reality of such terrestrial transformation and had established, on physical and chemical evidence, that radium was actually transformed into "radium emanation" and thence further into helium. Doon discovered the emanation of radium, as sharply distinguished from the three classes of rays emitted by this "element." Ramsay had accomplished the exceedingly difficult task of observing the spectrum of this radium emanation; and this was the starting point of Snyder's investigation. It seemed to the latter that Ramsay had apparently exhausted the list of discoverable gases and that this element of radium emanation would have interesting relations to stellar spectra. (The trend of chemical science to-day seems to be to find all "elements" to be but varieties of one fundamental element, one primal form of matter. Sir Oliver Lodge sets this forth). With the help of the researches published by Hartmann, of the Astro-physical observatory at Potsdam, Snyder identified radium emanation with fine coronal lines, and particularly with the coronal material discovered by Young and Harkness during the total solar eclipse of 1869, and thence called coro-

nium; he identified five of the lines of the radium emanation with Vogel's best determined lines of the aurora; he also made identification with the bright lines of Campbell's stars, in the spectra of the nebula; and, finally, at least a dozen positive identifications of radium lines with the dark absorption lines of the fourth type stars, as observed by Hale of the Yerkes Observatory. —*The Medical Times*.

THE THERAPEUTIC USE OF THE X-RAYS.

First referring to his early articles on the subject, W. A. Pusey, Chicago, gives *Journal A. M. A.*, May 13, the results of his later experience with the x-ray. In some disorders, such as hypertrichosis and lupus erythematosus, the results have not equalled expectations; in some others, such as tubercular glands and joints and deep sinuses, the results have been variable, though with some marked successes. The value of the x-rays has been most markedly demonstrated in sycosis, tinea, acne, rosacea, lupus vulgaris, blastomycosis, cutaneous carcinomata and senile keratoses. The value of the x-rays has also been shown in hyperidrosis, inflammatory dermatoses, pruritus, nevi, keloid, sarcoma and as a prophylactic after operation for malignant disease. In some other conditions, abdominal tuberculosis, actinomycosis, mixed tumors of the parotid, there has been apparent benefit from the x-rays, but Pusey does not feel inclined, from his experience, to make any very positive generalizations. In the deeper situated cancers, as might be expected, the treatment is less hopeful, though palliation may be hoped for and some surprisingly good results are reported. In conclusion, Dr. Pusey gives his latest experience with pseudoleukemia, leukemia, and goiter. In the former he has repeatedly seen clearing up of the glands, but in the only case he has been able to follow up there have been repeated recurrences. In true leukemia he has seen like good effects as regards disappearance of the enlarged glands, but generally without any corresponding improvement in the condition of the blood. One remarkable successful apparent cure is reported, the blood examination revealing normal conditions and the patient apparently well. In some small parenchymatous goiters he has seen reduction in size of the tumor, but in most of his cases no benefit was observed.

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EDITORIAL.

HIPPOCRATES.

Hippocrates has been justly termed "The Father of Medicine." He was born in Cos in the year 460 B.C., and died at Larissa in Thessaly. Various statements are given as to his age, but it seems that the most reliable authority would fix it at about 100 years. He belonged to the family of the Asclepiadæ and was believed to be the seventeenth in direct descent from Aesculapius. He studied medicine under his father, Heraclides, and philosophy under Gorgias. He travelled a great deal and practised at Athens, Thrace, Thessaly and Delos. The statements made by some ancient writers derogatory to his character may be dismissed, as his own writings go to show that he was a man of the highest integrity. Further, he was held in the utmost veneration by the Athenians, which go to prove his unblemished character.

He was the first to cast superstition aside and to base the practice of medicine on rational principles and inductive philosophy. He lived at a time of remarkable intellectual development; for Greek life and thought was then influenced by such men as Socrates, Plato, Sophocles, Aeschylus, Herodotus, Thucydides and Euripides. Democritus, the master of the doctrine of atoms, was one of his teachers. He strongly abhorred the resort to charms and incantations. He was a very faithful recorder of natural phenomena and in this way gained a most intimate knowledge of the clinical features of disease. He was a true naturalist and completely separated his study and practice from priestcraft. He also was anxious to separate medicine from philosophy, lest mysticism and theory should obscure the results obtained from observation. Though he regarded, as the Greeks of his day did, a religious element in disease, yet he held that all disease must be treated by natural methods. He was a powerful advocate of the importance of a true conception of the *vis medicatrix naturae* in the treatment of disease; but held that the best results could only be had after much experience in the management of diseases as they are met with in the individual.

While he attached great importance to experience, he did not believe in blind empiricism. Strongly as he urged the natural powers to make for recovery, he did not stand idly by and trust to expectant treatment alone.

He advocated judicious intervention. He taught "the support of enfeebled and coercion of outrageous nature." He employed strong remedies, and blood-letting and cupping were made use of by him, though he says care should be taken in resorting to them. He attached very much importance to diet and regimen and sanitary principles, and many of his axioms are accepted even to-day. His treatise on Air, Water and Places is the earliest work extant on public health.

He was a very acute observer as shown by his work on Prognostics. Here we meet with many keen criticisms on the progress of disease and the signs and symptoms that enable one to form a judgment as to the probable ending of the case. Hippocrates in his teachings on the value of succussion, as a means of determining the presence of fluid in the thorax, laid the foundation for the practice of auscultation. Indeed, it was from this source that Laennec derived the principle which he so ably worked out, and he admits that Hippocrates had practised immediate auscultation. His description of the facial appearance of the dying remains unrivaled, and every physician speaks of the "facies Hippocratica."

In surgery he has left some very shrewd observations on injuries to the head, on the use of the trephine, on dislocations, and on fractures. On luxations he is more complete than Boyer or, perhaps, even Dupuytren. He very clearly drew a distinction between external and internal diseases and injuries. Spinal curvature was recognized by him as caused by trauma, or from some internal condition of faulty health, and that with this form of the disease tubercles were often present in the lungs. The first principles of asepsis and antisepsis are found in his writings, as he urges that poultices should only be placed round a wound and not over it, and that, unless water is very pure, it should be boiled before it is used on wounds. He advocates the employment of wine and balsams in the wounds. He advocates the employment of wine and balsams in the treatment of foul wounds. In this we see the employment of simulating and antiseptic agents. The dressings were to be of new material and the operator's hands and nails were to be thoroughly cleansed. Puerperal fever was regarded as the same as wound fever. He recognized that injury to the temporal region caused paralysis on the opposite side; and he taught, in paralysis from injury to the spinal region, incontinence of urine and faeces augured a fatal termination of the case.

The following works may be accepted as quite genuine. On Ancient Medicine, The Prognostics, The Aphorisms, The Epidemics, On Regimen in Acute Diseases, On Airs, Water, and Places, On the Articulations, On Fractures, The Instruments of Reduction, The Physician's Surgery, On Injuries of the Head, The Oath, and The Law. There are many other writings that, though not by him, are from his immediate pupils, and give us much more of his teachings regarding diseases and injuries.

In physiology and pathology, he was a humoralist. No real physiology or pathology in his day existed, but he had a broad idea of function and its perversion in disease. He was dominated by a rational and scientific spirit. When viewed in the light of his times and that of subsequent history, the life and writings of Hippocrates command our highest regard; and, indeed, justify us in claiming for him the first place among the masters of medicine.

The Hippocratic oath is a remarkable code of ethics, and is here given in full: "I swear by Apollo the Physician, by Aesculapius, by Hygeia, Panacea, and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and stipulation; to reckon him who teaches me this art equally dear to me with my parents; to look upon his offspring upon the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction I will impart a knowledge of this art to my own sons, to those of my teachers, and to the disciples bound by a stipulation and oath according to the law of medicine, but to no others. I will follow that system of regimen which, according to my best judgment, I consider best for my patients, and abstain from whatever is injurious. I will give no deadly medicine to anyone if asked; nor suggest any such counsel. Furthermore, I will not give to a woman an instrument to procure abortion. With purity and holiness will I pass my life and practise my art. I will not cut a person who is suffering with stone, but will leave this to be done by those who are practitioners of such work. Into whatever house I enter I will go for the advantage of the sick, and will abstain from every voluntary act of mischief and corruption, and, further, from the seduction of females or males, bond or free. Whatever in connection with my professional practice, or not in connection with it, I may see or hear, I will not divulge, holding that all such things should be kept secret. While I continue to keep this oath inviolate, may it be granted me to enjoy life and the practice of my art, respected always by all men; but should I break through and violate this oath, may the reverse be my lot." This takes a second place only to the golden rule laid down by the greatest of all teachers.

CHANCELLOR SIR JOHN BOYD ON CHRISTIAN SCIENCE.

In opening the court his lordship recited to the grand jury the facts in the case of Mrs. Goodfellow, a Christian Scientist, charged with manslaughter. He told the grand jury that if the patient who died under the treatment elected to be treated by that system in preference to the treatment of the medical doctors, it was the unfortunate's own fault.

"But whatever your conclusions may be on that subject," said his lordship, "it is important, to my mind, to recommend you strongly to consider this, whether some precaution should not be taken against this sort of thing in the future that exists in this unlimited sort of way.

"What I mean is this: Here is a class of people who are exempt from the laws of the land in their dealings with the sick; they claim that their system of Christian Science is one of religion as well as a system of therapeutics. This is very well, so far as it is a system of religion; they are tolerated; they are free to exercise their religious beliefs in any way they please, so long as they do no harm to the general commonwealth. But when they claim to have a system of therapeutics—of healing—of dealing with disease—is it right that they should be exempt from the laws of the country? What I mean is this: They don't know anything about disease. These persons, who are called healers, are of no standing in particular. You may take a waiter in a hotel, or a barber, and, after giving him a course or seven or eight lectures by Mrs. Eddy or some of those trained under her teaching, that person is qualified to charge \$2 or \$3 for a treatment of this nature. Part of this treatment is to read the Lord's Prayer with a spiritual interpretation of Mrs. Eddy, which Principal Sheraton says so confounds it that Our Blessed Master Himself would hardly understand His Own prayer.

"The law as it stands at present says they are not practising medicine. They do not diagnose disease. They make no difference between typhoid fever, toothache, headache, smallpox, or any of the infectious diseases; all are treated in the same silent way by an appeal to the mental condition of the patient that he is not suffering from any disease. I myself have a conviction that this lad might have been saved if he had been where means for the proper treatment of this kind of disease could have been afforded him. I myself have come through this kind of disease, and I know the value of doctor's treatment. Even although they may not give many drugs, their care, their attention to symptoms, their noting every change of the pulse, enables them at the critical moment to apply remedies, slight though they may be, which turn the patient from the path of death to the path of life."

The above words of Sir John Boyd will commend themselves to every medical practitioner. Long and earnestly the medical profession has called out against this crazy fad, known as Christian Science—and science hides her face at this use of the word. But so long as the protest came from the ranks of the medical profession, there was slow response; for the answer came back from many quarters, "This is jealousy." When, however, so eminent a jurist and well known citizen as Sir John Boyd speaks out in such strong words there is hope that something may be done.

Be it understood in all that the medical profession has said or written upon this subject, it has not been seeking its own protection, but that of the public. In this matter the attitude of the profession has ever been the same as it has been with regard to smallpox, or other infectious diseases, or in the matter of the advance of the sanitary condition of the people. The only way that this fad can be ended is by securing the requisite amendment to the statutes. People who hold that there is no such thing as disease, pain, or infection should not be allowed to take charge of the sick and imperil their lives, or well-being. But there is something that the medical profession can do to secure so desirable an object as the suppression of these people. Doctors can discuss this subject in a full and fair manner with the members of the legislature from their respective ridings. In this way the Legislature can be made to see the wisdom, nay more, the necessity of doing something to prevent these so-called scientists attending the sick and imposing upon the ignorant their insane views of disease and its treatment. Public inertia is hard to move, but the history of the world shows that it can be moved. Let this be an instance where history repeats itself. *Sera nunquam est ad bonos mores via.*

THE DRINKING HABIT AND CRIME.

In our issue for May we dealt with the use of alcohol as a therapeutic agent in medicine and surgery; and quoted from high authority to the effect that it occupies a much lower position as a remedy, a stimulant and a food, in the professional estimation, than it did, even a few years ago. We now take the liberty of quoting the following from *The Pioneer* which shows the increase in the consumption of alcoholic beverages in this country; and, with this increase, an increase in crime.

“There has been of recent years an enormous increase in the quantity of spirituous liquors consumed by the people of Canada. The fiscal year for which the returns concerning the manufacture and consumption of alcoholic liquors are compiled, ends on the 30th day of June. The total quantities of intoxicating beverages entered for consumption per capita of our population for the last six years were as follows. The figures are for gallons :

Year.	Spirits.	Beer.	Wine.	Total.
1899 ... ..	.661	3.995	.086	4.742
1900 ... ..	.701	4.364	.085	5.150
1901 ... ..	.765	4.737	.100	5.602
1902 ... ..	.796	5.102	.090	5.988

1903 ... ..	.870	4.712	.096	5.678
Total	3.793	22.910	.457	27.160
Yearly Average... ..	.759	4.582	.091	5.432
1904 ... ..	.952	4.918	.096	5.966

“The total increase in consumption of alcohol is better shown by setting out what would be the equivalent in proof spirits of all the intoxicating liquors drunk. This is done by reckoning beer as containing 5 per cent. of alcohol and wine 15 per cent. Estimating both according to the convenient and sufficiently accurate assumption that proof spirits contain 50 per cent., and adding the quantities of spirits consumed, we obtain the following table, the figures as before representing gallons per capita :

Year.	Total liquor consumed.	Equivalent in proof spirits.
1899	4.742	1.096
1900	5.150	1.102
1901	5.602	1.269
1902	5.988	1.333
1903	5.678	1.369
Total.....	27.160	6.159
Average	5.432	1.232
1904	5.966	1.521

This shows for 1904 a consumption of alcohol 40 per cent. greater than that of 1899, and about 23 per cent. greater than the average for the five years ending in 1903.

“The criminal year ending September 30, 1903, includes three months of the fiscal year ending June 30, 1904. We do not, however, propose at present to deal with special years, so much as with the general tendency that the figures show. The criminal statistics for the year ending September 30, 1904, have not yet been published. We therefore use the last available report, which is for 1903. It shows the following as the number of convictions made for drunkenness, and for all offences, including drunkenness :

Year.	for Drunkenness. Convictions	for all offences. Convictions
1898	11,259	38,206
1899	11,090	38,710
1900	12,215	41,654
1901	12,727	42,148
1902	13,324	43,536
	<hr/>	<hr/>
Total	60,615	204,254
	<hr/>	<hr/>
Average	12,123	40,851
	<hr/>	<hr/>
1903	16,532	50,404

"The increase in convictions for all offences in 1903 over the average for the preceding years was nearly 25 per cent., and the increase in convictions for drunkenness was over 36 per cent. The comparison between these increases and the increase in the consumption of intoxicants will be found interesting and instructive.

"The relation between drinking and crime is so generally admitted that neither arguments nor statistics need be cited in its support. Public opinion generally will endorse at least the estimate made by so experienced an observer and so cautious a speaker as the late Sir Oliver Mowat, who stated in the Legislature his conviction that at least 75 per cent. of all the crime and pauperism that afflicted society is the result of the drink evil.

"The convictions for all offences in 1903 were: Ontario, 21,996; Quebec, 9,944; Nova Scotia, 4,906; New Brunswick, 2,433; Manitoba, 3,063; Northwest Territories, 4,022; British Columbia, 3,602; Prince Edward Island, 438.

"For drunkenness there were in 1903: Ontario, 5,043; Quebec, 2,931; Nova Scotia, 2,726; New Brunswick, 1,458; Manitoba, 1,466; Northwest Territories, 1,278; British Columbia, 1,356; Prince Edward Island, 274.

"Everywhere there is an increase of crime in the period under review. Quebec, which has 448 municipalities without a retail license, and Prince Edward Island, in which there is prohibition, show a decrease in the convictions for drunkenness, but, as the writer puts it, "everywhere else the increase in drunkenness and in crime of all kinds is so great as to be almost discouraging."

Sir William Jenner taught that the first object of medicine was to prevent disease. We have not read history aright if it has not been to the effect that one of the great objects of the medical profession has also

been to raise the social standard and lessen all forms of crime. Not long ago the *British Medical Journal* contended that the time had come when the medical profession should form well-defined views upon the use of alcohol as a beverage. At the present moment a strong committee is at work on the subject of the teaching of hygiene and temperance in the public schools. Sir William Broadbent and Sir Victor Horsley grace the committee.

In addition to the long lists of crimes due to the consumption of alcohol in some form, we must add also long sick and mortality lists, such as nervous diseases, cirrhosis of the liver, and chronic granular kidney,

ADAPTATION AND TUBERCULOSIS.

We commend to the careful consideration of our readers Professor Adami's address on the above subject. He illustrates what he has to say by a wealth of references to other pathological processes which very materially enhances the value of his remarks on tuberculosis.

It appears from what he says that the human organism possesses the power to a very considerable extent of producing immunity in the case of tuberculosis. This is shown by the numerous instances of recovery. Were it not for the fact that immunity can be acquired all who became infected with the bacilli of tuberculosis would die. The organism, therefore, can produce an antitoxin, a circumstance that is proven by the clumping of the tubercle bacilli when brought in contact with the blood serum from a tubercular patient.

Another thought thrown out in the address of much practical importance is that real source of infection is from one person to another, and not from cattle to man. He does not deny the possibility of this, but contends that it is an infrequent occurrence. He also lays stress upon the fact the bacilli may become very virulent under favorable conditions.

With regard to treatment much stress is laid on the necessity of maintaining the health to its highest level. In this way the cells of the body are in their best condition to cope with the toxins of the disease and react to these toxins by producing antitoxins, establishing immunity and leading to improvement or possible cure. This lies at the foundation of all the modern plans of treatment by fresh air, sunlight, and good nourishment.

It is interesting to note what is said regarding the Japanese cattle, which appear to be immune to the disease. Consumption is quite common among the Japanese. It would, therefore, appear evident that it is not contracted from milk or meat, nor do the cattle take the disease from man in that country.

PUBLIC HEALTH IN INDIA.

In that vast portion of the British Empire known as India, there are vast and difficult problems of a sanitary character before the government for solution.

One of the most prominent of these is the disposal of sewage. The densely peopled cities in India run the sewage into the rivers, and, in this way, a very serious state of pollution has taken place, resulting in the spread of much disease. At the present time the government is busily engaged upon the question of septic tanks and the best methods of disposing of the sewage of the cities. But the peculiarities of the rain fall in India renders it very difficult to establish systems of drainage or septic tanks. Much, however, is being done, and efforts are being made to render Calcutta a fairly sanitary city.

Cholera, the plague, tetanus, and the bites of venomous reptiles are among the leading causes of mortality. In Calcutta the death rate averages 35 per 1,000. In the above city there are 30 deaths from cholera, 120 from the plague, and 20 from tetanus weekly; or about one-fourth of all the deaths.

One of the leading concerns of the government and the people is the extermination of the enormous number of rats which infest the country everywhere. Efforts are being made to destroy the rats, and, in this way, lessen the ravages of the plague. It is highly important that these rodents be destroyed before they become infected, otherwise their destruction seems to favor the spread of the disease. In 1904, the plague caused 1,034,787 deaths.

Vaccination is fairly well enforced, about one person in every twenty of the population being vaccinated annually. The scruples against the operation are giving way, and the course of the authorities made easier. About 98 per cent. of primary, and 78 per cent. of secondary vaccinations are successful.

As proof of the addage that "there is nothing new under the sun" it may be mentioned that some books on medicine, dating as far back as the sixth century, state that malaria is caused by the mosquito. Many varieties of both the mosquito and the disease are mentioned. It looks as if Laveran might yet be unhorsed by some of these early East Indian scientists.

Hospitals are being established in many parts of India. The better educated native men and women are trained in these and become very useful as attendants on the sick. These hospitals thus fulfill a double function—caring for the sick and acting as educators.

The government of India has taken active steps to bring to time the manufacturers of impure spirits, and to control the sale of poisonous or adulterated liquors.

THE ANCIENT EXISTENCE OF SYPHILIS.

A good deal has been written upon the existence of syphilis among the ancients, and where the disease came from in the first instances. It has been held by some that the disease existed in America and the old world long prior to the crossing of the Atlantic Ocean. Another set of writers urge that the disease was imported into Europe after the discovery of America by Columbus. On the other hand there are those who contend that the disease was brought to America from Europe.

In France many skeletons have been found, which the highest authorities have declared show the unmistakable evidence of syphilis. The skeletons belong to the stone age, and are undoubtedly as far back in history as the early Roman period.

Chinese writings place the existence of syphilis at a very remote date, as early indeed as 2,000 B. C. There are not wanting strong grounds for thinking that the disease prevailed among the Greeks and Romans in the days of their greatest prosperity. Skulls of a very remote time obtained in Peru clearly point out that syphilis was not unknown there. And there are indications of a credible nature that make it quite clear that the druids were acquainted with it.

It is thus quite evident that syphilis is not only a widely spread disease, but one that dates from very early times. From time to time, it has appeared in history to have assumed a very violent form. This occurred in Europe shortly after the discovery of America. Such a phenomenon may be due to the disease being rendered much more active by the type of it as it existed in America being taken to Europe.

The value of mercury in the treatment of the disease was also known to the ancients.

THE ONTARIO MEDICAL ASSOCIATION.

The Ontario Medical Association will begin its twenty-fifth annual meeting on the morning of Tuesday, June the 6th, under the presidency of Dr. Wm. Burt, of Paris.

A program full of papers of an exceedingly interesting character has been secured through the efforts of the energetic committee on papers. Beside the large number of local men who will participate, the committee feels itself honored in being able to announce papers to be read by two men from across the line who have distinguished themselves in their special fields of work, Dr. A. J. Ochsner, of Chicago, the eminent surgeon, and Dr. W. B. Pritchard, of New York, the neurologist associated with the Post-Graduate Hospital of that city.

The committee on arrangements will provide for a few hours of entertainment to relieve the strenuous program. This will take the form of a tea at the Ontario Medical Library on Tuesday afternoon at which the men from outside the city will be able to see the newly acquired home of the library and have an opportunity for a social hour together. On Wednesday evening an informal gathering will be held in the Biological Buildings at which pleasurable entertainment of a scientific and social character will be provided, taking the place of the burdensome luncheon which has heretofore held sway. Friends from the province are requested to bring their wives along with them and help the city men with their ladies make this a most enjoyable evening. The proceedings will be quite informal and it is not desired that any one bring his dress suit to adorn the occasion.

The fact that the post-graduate course of the medical faculty and the meeting of the executive health officers of the province immediately precede these sessions should ensure the largest attendance in our history. Even though that seems assured the value of these sessions to the younger practitioner should not be forgotten and should ensure a large attendance of young men.

Any association which, through a quarter century of existence, has steadily striven for absolute fairness and justice, as between man and man, for high professional ideals and the well-being of society, has in it the elements of perpetual strength and deserves the support of every man especially of the younger men who will most be profited by the conditions which the society has been largely effectual in securing.

THE PURE MILK LEAGUE OF MONTREAL.

His Excellency, Lord Grey, was present at the meeting of the Pure Milk League of Montreal which was held at Laval University.

Dr. Blackader, who presided, welcomed their Excellencies and thanked them for the interest displayed in this most important work. He went on to say that last year the league took an organized form, although in a private way it had been carried on for four years. The infant mortality of Montreal was particularly large and a matter of concern to every thoughtful citizen. It was caused mainly by impure milk and improper feeding at an age of active growth, when everything depended upon the child's diet. No artificially fed baby could be kept for any length of time without cow's milk, but even when pure this was hard to digest. The minimum bacteria in milk fit for infants' nourishment was 30,000 per cubic centimetre, while the best samples of Montreal milk showed 300,-

000, sometimes 5,000,000. Dr. Blackader cited the beneficial results attained in Buffalo and Rochester by the work of the Pure Milk League in these cities. In Rochester the infant mortality in 1903, was reduced by 40 per cent. as a result mainly of the improved milk supply.

Dr. Dagenais, speaking in both French and English, gave some interesting details of the work done by the Health Committee to improve the milk used in Montreal. He explained the necessity of having all the milk cans coming into the city from outlying districts properly sealed, so that they could not be opened until they reached their destination. It was not an uncommon occurrence, said Dr. Dagenais, for railway employees to open the cans as they lay at the way stations and sample the contents. The necessity for certified dairies was urgent, and the Health Committee, with time and patience, would succeed in educating the farmers to their importance.

Dr. Dubé, vice-president of the league, gave an account of its work during the past year. There had been three dispensaries, one of which had been kept open 261 days, and which had supplied milk to 226 babies. The infant mortality in this district had only reached 10.8 per cent. while in other portions of the city it was 37.9. The expenses of the league were unfortunately one-third more than the income, and the work was naturally somewhat hampered for want of funds.

Prof. Robertson, ex-Commissioner of Agriculture, spoke in favor of a wider education of the farmers to the need of a pure water supply on the farms, because of the need of cleanliness in dairy work. He advised the employment of an inspector, or instructor, to go out among the dairy farmers to instruct them in correct methods.

Lord Grey briefly cited the efforts of Seybold Rowntree in England, in establishing a dairy farm where pure milk was distributed to mothers for their infants, and pointed to the dairy farm outside Ottawa as a hygienic and scientific institution. He said that absolutely pure milk should always command a higher price than a doubtful supply, and mentioned that in the districts about York, England, 50 per cent. more was willingly paid for milk sold by certified dairies.

Sir William Hingston, at the close of the meeting, moved a vote of thanks to their Excellencies for their presence at the meeting and their active interest in the league.

At a meeting of the finance committee of Montreal an increase of \$500 to the original grant of \$500 was voted to the Pure Milk League; and this with the additional subscriptions received, will put the league in a much better financial state than it was last year.

CANADIAN MEDICAL ASSOCIATION.

As we have already announced, the thirty-eighth annual meeting of the Canadian Medical Association, will take place this year in Halifax, under the presidency of Dr. John Stewart of that city, who along with his executive committee, and programme and committee of arrangements, are ardently working for the complete success of this meeting, the first which has been held in Halifax since 1881, when the number present just numbered fifty-three. If an united effort be put forth by the vice-presidents and local secretaries in the different provinces, especially in Nova Scotia, Prince Edward Island, New Brunswick, Quebec, and Ontario, there should be a largely attended meeting. There are indications that Montreal and Toronto are both going to send down good contingents. Daily there are additions to the list of contributors, whose names we will publish in a later issue. This year all delegates will travel on the usual standard convention certificate plan, which means that every delegate when purchasing single first class fare to Halifax, must get from the ticket agent a standard convention certificate for himself, his wife or daughters if they accompany him. Delegates will kindly bear in mind that they do not have to get any special certificate from the general secretary. If fifty are present holding standard convention certificates, all will be returned free to Montreal. Montrealers will, as well as delegates from Quebec, be returned for single fare. If there are 300 present holding these standard convention certificates, all will be returned free to their original starting point. This applies to all parts of Ontario, Manitoba, the Northwest Territories and British Columbia. Delegates from points west of Port Arthur, will not be allowed to use the upper lake routes when travelling by this certificate plan, in either direction. In all cases return transportation *must* be arranged for at Halifax. The usual time limit for conventions will be allowed for points east of Port Arthur, namely, three days before and three days after the meeting. Our readers will kindly extend this information as much as possible and those who intend contributing papers and being present, are requested to notify the general secretary, Dr. George Elliott, 203 Beverley St., Toronto, without delay. No arrangements can be secured for return via Boston or New York after the meeting; and those desiring to be routed thus, should ask for tourists' tickets. Arrangements are in progress for completion about the end of May, for boat trip Toronto or Kingston to Montreal or Quebec via the Richelieu and Ontario Navigation Company's line.

THE TRIAL OF THE CHRISTIAN SCIENTISTS.

In the case of the death of Wallace Goodfellow the grand jury made the following recommendation :

"We believe that the matters involved are of sufficient importance to warrant a recommendation to the Ontario Legislature that an enquiry be made into the whole matter, so that the law may be made explicit as to the rights of all parties concerned."

After a full and thorough trial, the counsel for the defendants presented his arguments to the jury.

Mr. DuVernet, in the course of a vehement reply, laid stress on the danger which would result if Christian Scientists were allowed to practise their doctrines without reference to the law. Christian Scientists held, he said, that a person with smallpox had not a disease. It was a delusion. Suppose that person went out in that condition and mixed with other people. If it were allowed it would lead to sickness and death and plague in the community. Mr. DuVernet commented on the attitude of Mrs. Stewart, who, holding the opinions she did, yet admitted she sent for a doctor when her child was born. Further, that when Mrs. Stewart's husband was in his last illness three doctors were called in. It appeared that these people, when rich, did not take the risk of losing those near and dear to them, but when others less well off were concerned they were not so particular. Mr. DuVernet referred to the fifth chapter of St. Luke and the 31st verse in answer to Mrs. Stewart's contention that there was nothing in the Bible about doctors. This verse reads, "They that are whole need not a physician, but they that are sick." Christian Science treatment, he said, was not recognized by the law.

Mr. Justice Magee, in his charge to the jury, said the question for them to decide was, did these defendants conspire to deprive Wallace Goodfellow of the necessities of life? And it was for them to decide what the "necessaries" were under the circumstances.

Speaking of Christian Science, his lordship said that, though cures have been brought about by Christian Science, there was no case where the mind had cured actual organic disease, such as smallpox, or cancer. No doubt, the mind had a certain influence over the body, and when the mind was at rest that condition gave nature a chance to throw off disease. He asked the jury to consider the difference in the evidence of Mrs. Stewart and that of Dr. Johnson. He described the ulcers on the intestines and the other symptoms. Did she know anything of these? If not, how could she hope to cure them? "Would you believe," his lordship asked, "that by thinking you could drive away an ulcer? Does that appeal to your common sense? Have these people shown evidence of such or-

dinary human care and knowledge as to relieve them from liability to the law? But, though this is a serious question for you, the chief question is, Did they conspire?"

After rehearsing the facts as brought out in the evidence, his lordship told the jury that the defendants' affection or their belief that they were acting for the best would be no justification. He told the jury to look at the case in the light of common sense. It was an important case, he said, important to the defendants and important to the public.

After an absence of three hours and a quarter the jury engaged in trying the case against the four Christian Scientists—Mrs. Sarah Goodfellow, Mrs. Isabella Grant, Mrs. Elizabeth See and William Brundette—returned into court with a verdict of "guilty of conspiracy" against all the defendants.

Mr. Cassels, K.C., on behalf of the defendants, applied for arrest of judgment until after the stated case had been heard. Justice Magee thereupon postponed judgment until the 30th of June, and agreed to accept the defendants' own recognizances of \$500 each to appear on that date. The maximum sentence on such a charge is seven years' imprisonment.

During the trial some very remarkable statements were made by those who believe in Christian Science. The essence of these is to the effect that disease has no existence if one only thinks that it has not, and disease can be treated by the absent and silent method.

PERSONAL AND NEWS ITEMS.

Dr. George Chene, of Windsor, and Dr. G. W. Robinson, of Scarborough, were recently appointed house surgeons of St. Mary's Hospital, Detroit, for two years. Dr. Chene is a graduate of Toronto University. The medical and surgical staff of St. Mary's is now entirely Canadian, Dr. McLean, head surgeon, being a native of St. Mary's and Dr. McIntyre, assistant, of Forest.

Dr. Walker, of Thessalon, will shortly move to St. Ignace, Mich., where the doctor will practice his profession.

The engagement is announced of Miss Olga V. Ball, daughter of J. H. Ball, M.A., to Dr. James A. Cowper, both of Welland. The marriage will take place in June.

Dr. W. T. Wilson has been transferred from the London to the Hamilton Insane Asylum. Dr. Wilson has been in London since November. His place will be taken for a while by Dr. St. Charles, a relieving physician, who is now in Orillia.

Dr. McNaughton, who has disposed of his practice and residence to Dr. Burns, will be in Brussels from Wednesday noon until Saturday noon of each week, for some months, to assist Dr. Burns in his work.

Dr. Leonard Mylks, son of Mr. and Mrs. Mylks, of Glenmore, who has been for some months on the house surgeon staff of Winnipeg General Hospital, has left that institution to look after a practice in Wolseley, Assa., for the summer months.

Dr. Neil J. McLean has returned to Winnipeg from Europe, where he has spent the past year in the hospitals of London and Berlin.

Dr. and Mrs. S. G. Story left Montreal on the Allan Line turbine steamer Victorian on May 12th and will spend a few months in Great Britain.

Dr. McTavish is now established in the practice of medicine in Altona. He bought out the practice of Dr. Meek, who has gone to Baltimore, Maryland.

Dr. Duff, who has been associated here with Dr. J. L. Wilkinson, of Petrolea, for the past year and a half, left a short time ago to visit at his home near Toronto. He then proposes going to the Northwest. He was tendered a farewell supper by his young companions at the Tecumseh house, there being about twenty present.

Dr. C. J. Stewart, of Calgary, Liberal candidate in the recent Dominion election, and one of the most popular young men in the west, was married very quietly to Miss Hattie Ethel Bucklaus, of Toronto. The wedding took place in Calgary and was performed by the Rev. Dr. McRae.

Dr. Macdougall King, who for some time past has been on the medical staff of the large hospital connected with the Copper Queen Consolidated Mining Company, Bisbee, Ariz., and engaged in a general practice there, is at present on a visit to Toronto, and is staying with his parents, Mr. and Mrs. John King, 4 Grange Road. Dr. King was formerly on the medical staff of Denver University, Colorado.

Dr. Sargent, who for thirteen years has successfully practised his profession at Springbrook, left recently for his new home in Colborne, having purchased the practice of Dr. Douglas. Dr. Sargent has deservedly won the highest esteem of a wide circle of friends, not only as patients, but among the members of the profession. The best wishes of all are that the doctor will have as many true friends in Colborne and vicinity as he had in and around Springbrook and Stirling.

The tenth regular course of instruction for post-graduate students will be given by the Faculty of Medicine of McGill University during the month of June, 1905. The course will begin on Monday, June 5th, and will be carried on until Friday, June 30th. This year it has

been decided by the Faculty to depart somewhat from the lines upon which the course has been conducted in the past. The principle adopted in framing the work for this season is to make each course optional, thereto a special fee. The applicant, after paying the initial registration fee, is entitled to select the courses which seem to be best suited to his needs. The programme, speaking broadly, includes general clinics and special courses, the latter having been added this year, in order to meet the wishes of those who desire work along special lines. In addition to stated special courses arranged, if a sufficient number of men—three or more—desire special instructions in any one subdivision of a subject, they may secure it by applying to the head of the department concerned, or to the registrar. A course will then be arranged according to their wishes, as far as is possible, and a special fee will be charged. A registration fee of \$5 will be charged each student.

The Western Hospital, Montreal, is about to begin work upon a new wing which is to cost about \$50,000. This wing is the first of a series of buildings which, when completed, will form a new hospital, the present building being used as a nurses' home. The cost of the improvements will be about \$200,000, but they will not be attempted at one time as the funds do not warrant such action. The need of increased accommodation is felt by the staff, as a large number of public and private patients have recently been refused admission.

Dr. J. T. Duncan, of Toronto, has gone to Britain for a three month's trip.

The annual convocation of the University of Toronto will take place on the 9th June, at 2.30 p.m. There will be a garden party later in the afternoon, and a dinner in the evening.

A meeting of the medical practitioners was held at Regina on May 16th and a medical society was formed and the following officers were elected. President, Dr. Low; vice-president, Dr. Thompson; sec.-treas., Dr. Black; and a council consisting of three, Drs. Seymour, Bell and Charlton. It is the intention of making this a branch of the British Medical Association and calling it the Regina Branch of the British Med. Association.

OBITUARY.

FRANCIS WAYLAND CAMPBELL, M.D.

Dr. F. W. Campbell, 1006 Sherbrooke Street, Montreal, died on 4th May, after an illness of many months.

His death is peculiarly sad. Not a year ago his eldest son, Dr. Rollo Campbell, died quite suddenly, and while Dr. Campbell, senior, was lying

on his death bed a week ago another son, Mr. F. W. Campbell, succumbed to pneumonia, and owing to the doctor's weak condition, he was not told of his youngest son's decease.

A picturesque personality was removed from our midst when death overtook Dr. Francis Wayland Campbell at the age of sixty-eight. The deceased gentleman was a life-long resident of Montreal, and had taken an active part in the stirring days of half a century ago, both in the city and in military operations. Although an exceedingly busy and capable physician, he devoted much of his life to military work, joining the Prince of Wales Rifles in 1860, and served through the Fenian troubles of 1866 and 1870 as surgeon. Always interested in literary work, and an excellent writer himself, Dr. Campbell wrote what is regarded as the most valuable history extant of these military operations. This was first delivered in lecture form at Montreal Military Institute, but, at the request of his brother officers, was later elaborated and published in pamphlet form.

In his younger days Dr. Campbell was a man of powerful physique and dauntless courage, which at one time almost led to an early closing of his career, during an election, but luckily succeeded in getting away with his life.

Military work was the ruling interest of Dr. Campbell's life, outside his professional duties. An old-time member and ex-president of the Montreal Military Institute, he was a frequent habitue of their quarters, and delighted both himself and his friends with his copious fund of anecdotes of his experiences in the more strenuous days of his youth. He was always to the fore when military matters were under discussion, and one of his last public appearances was at a very large meeting of Montreal officers, called a few months ago to discuss the question of a military school for Montreal. On this occasion Dr. Campbell made a speech, warmly advocating the establishment of the school, and favoring the La-fontaine Park site.

In his younger days Dr. Campbell had taken a lively interest in field sports, especially lacrosse, of which he was a liberal patron, although he never played to any extent.

A man of wide attainments, a most genial disposition, and an excellent speaker, Dr. Campbell was greatly beloved by a very large circle of friends who will sincerely mourn his untimely decease. For untimely his death was, despite the fact that he had almost attained the allotted three score and ten years. Some three years ago while driving with his coachman, he was run into by a street car and was very severely injured, his coachman also being badly hurt. He was laid up for a long time as a result of the accident, and never completely recovered his health; his death was undoubtedly hastened by this cause.

Francis Wayland Campbell, M.D., was born in Montreal, Nov. 5, 1837, and was the son of the late Rollo Campbell, formerly publisher of the Montreal Daily Pilot. He received his early education at the city public schools, and at a youthful age entered McGill medical school. Previous to joining the university he had studied for a short time with the late Dr. Jas. Crawford. At McGill he made rapid progress under the watchful eye of his talented and skilled namesake, the late Dr. George W. Campbell, and Dean of the Faculty, Dr. Holmes. The deceased graduated in 1860, receiving his M.D. degree, and shortly after he proceeded to make a tour of the large hospitals of Great Britain and Ireland, and the continent. The following year he passed a most successful examination before the Royal College of Physicians of London, and later on was elected a member of the Royal Medical Society of Edinburgh and of the Microscopic Club. He returned to Canada in the autumn of 1861 and at once began the practice of his profession, and in a short time built up a large clientele. In 1872 he assisted in founding the medical faculty. University of Bishop's College, Lennoxville, and became its first registrar. Subsequently for ten years he was professor of physiology and then was elected dean of the faculty, a position he held at the time of his death. He also held the chair of practice of medicine. Dr. Campbell was, for ten years, secretary of the College of Physicians and Surgeons of Quebec. He was physician to the Montreal General and Western Hospitals, besides being medical officer of the New York Life Insurance Co., and chief medical officer of the Citizens' Insurance Company of Canada. He was one of the editors of the *Canadian Medical Journal*, 1864-1872, when he established the *Canadian Medical Record*, of which he remained editor for over thirty years.

Dr. Campbell was gazetted assistant-surgeon of the First Battalion Prince of Wales Rifle Regiment in 1860; was promoted surgeon in 1866 and retained that rank till 1883, when he was appointed surgeon-major of the Royal Regiment of Canadian Infantry, (permanent corps), attached to the company stationed at St. Johns, Que. He was on active service at Hemmingford and Ormstown, during the Fenian raid of 1866, and at St. Johns and Pigeon Hill during the raid of 1870. He received a medal and clasps for the Fenian raids and was also awarded the Colonial Long Service decoration for officers by the Imperial Government. In 1894 he established the V.R.I. Magazine and became its first editor.

The degree of D.C.L. was conferred on him by Lennoxville in 1895. Dr. Campbell was a member of the Montreal Military Institute, of which he was for two years president, and of St. James' Club. He was a past master of Victoria Lodge of Free Masons. In 1861 he married Miss Agnes Stuart Rodger, of Greenock, Scotland.

BOOK REVIEWS.

WELCH & SCHAMBERG ON ACUTE CONTAGIOUS DISEASES.

Welch & Schamberg on Acute Contagious Diseases. A Treatise on Acute Contagious Diseases by William M. Welch, M.D., Consulting Physician to the Municipal Hospital for Contagious and Infectious Diseases; Diagnostician to the Bureau of Health, etc., Philadelphia, and Jay F. Schamberg, A.B., M.D., Professor of Dermatology and of Infectious Eruptive Diseases, Philadelphia Polyclinic; Consulting Physician to the Municipal Hospital for Contagious and Infectious Diseases, and Assistant Diagnostician to the Philadelphia Bureau of Health, etc. In one very handsome octavo volume of 781 pages, illustrated with 109 engravings and 61 full-page plates. Cloth, \$5.00 net; leather, \$6.00 net; half morocco, \$6.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

The authors, from years of faithful study and abundant clinical experience, are peculiarly well equipped to furnish precisely the practical information which the every-day physician needs, and they have succeeded in presenting this knowledge fully and clearly in a style of diction which makes reading a pleasure as well as a profit. The Philadelphia Municipal Hospital offers almost unlimited opportunities for the consideration of contagious diseases, and the work is based upon the personal study of the many patients who come daily under the charge of the authors; thus there have been studied nearly ten thousand cases of each of smallpox, scarlet fever and diphtheria in addition to the very many cases of the other diseases discussed, such as vaccinia, measles, chicken pox, rubella, typhus fever, etc. Diagnosis and symptoms are given the thorough attention they deserve, and as the volume is intended primarily to be a practical guide to the practitioner who may not have had the advantage of a large clinical experience in this field, treatment both medicinal and non-medicinal, hygienic measures, disinfection, etc., are all covered with careful complete details. In illustrations the book is rich indeed; the pictures alone are easily worth the price of the book; the material was abundant and beautifully clear photographs of patients in the successive stages of the various diseases are used wherever the text can be made clearer thereby. It is a work which will find a readily accessible place on the shelves of every practising physician.

DISEASES OF THE BLOOD.

Diseases of the Blood (*Anemia, Chloresis, Leukemia, Pseudoleukemia*). By Dr. P. Ehrlich, of Frankfort-on-the-Main; Dr. A. Lazarus, of Charlottenburg; Dr. K. von Noorden, of Frankfort-on-the-Main; and Dr. Felix Pinkus, of Berlin. Entire volume edited, with additions, by Alfred Stengel, M.D., Professor of Clinical Medicine, University of Pennsylvania. Octavo volume of 714 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$5.00 net; Half Morocco, \$6.00 net. Canadian agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This volume on Disease of the Blood is the ninth in Nothnagel's Practice to be published in English. It includes Anemia, Chlorosis, Leukemia, Chloroma, Pseudoleukemia, and each condition is treated so exhaustively and the theories discussed so carefully that the work will remain the last word on the several subjects for many years. Dr. Alfred Stengel, under whose excellent supervision the entire series is being issued, is also the individual editor of this volume. His wide experience and recognized ability as a clinician, and his valuable work concerning the histology, both normal and pathologic, of the blood, renders this volume of unusual interest. His additions are particularly frequent in the article on Anemia. When this series is completed—and the publishers assure us that the three remaining volumes will shortly appear—it will undoubtedly form the best practice of medicine in existence, expressing the opinions of the highest German and English speaking authorities.

A REFERENCE HANDBOOK FOR NURSES.

A Reference to Handbook for Nurses. By Amanda K. Beck, of Chicago. 32mo volume of 150 pages. Philadelphia and London: W. B. Saunders & Company, 1905. Bound in flexible morocco, \$1.25 net. Canadian agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This little book contains information upon every question that comes to a nurse in her daily work, and embraces all the information that she requires to carry out any directions given by the physician; it includes also instructions for all emergencies that may arise before or between visits of the physician. It is of immense value to student nurses because it contains all the material they are expected to commit to memory from notes. Physicians, too, will find the book of value, because it contains exact details as to solutions, foods, dosage, poultices, applications, etc. There are also articles on bacteriology, massage, medical electricity, obstetrics, care of infants, and such information. The mechanical get-up of the book is both convenient and attractive. It is of a size to fit the pocket and is neatly bound in flexible morocco.

A TEXT-BOOK OF MEDICAL CHEMISTRY AND TOXICOLOGY.

A Text-Book of Medical Chemistry and Toxicology. By James W. Holland, M.D., Professor of Medical Chemistry and Toxicology, and Dean, Jefferson Medical College, Philadelphia. Octavo volume of 600 pages, fully illustrated, including 8 plates in colors. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth. \$3.00 net. Canadian agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

Dr. Holland possesses the faculty of making even the most difficult and complicated chemical theories and formulae easy and clear. This is probably due to his thirty-five years' of practical experience in teaching chemistry and medicine. Recognizing that to understand physiologic chemistry students must first be informed upon points not referred to in most medical text-books the author has included in his work the latest views of equilibrium of equations, mass-action, cryoscopy, osmotic pressure, dissociation of salts into ions, the effects of ionization upon electric conductivity, and the relationship between purin bodies uric acid, and urea. Chemical substances he has treated from the standpoint of the medical student and physician, giving much more space to Toxicology than is given in any other text-book on chemistry. The chapters on the clinical chemistry of milk, gastric contents, and the urine, and that on water supply and filtration are full of practical information. Dr. Holland's work will undoubtedly be gladly received by the profession, presenting as it does the mature experience of a practical teacher.

PROFESSOR ALLBUTT ON HISTORY OF MEDICINE AND SURGERY.

The Historical Relations of Medicine and Surgery to the end of the Sixteenth Century. An address delivered at the St. Louis Congress in 1904. By T. Clifford Allbutt, M.A., M.D., Hon. M.D., Dub., Hon. LL.D., Glasg., Hon. D. Sc., Oxon Vic., F.R.C.S., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge, Fellow of Gonville and Caius College, Hon. Fellow Royal College of Physicians of Ireland, and of the New York Academy of Medicine. London: Macmillan and Co., New York: The Macmillan Company, 1905. Price, 2s. 6d.

This is a delightful resume of the history of medicine and surgery down to the end of the sixteenth century, especially where medicine and surgery touch each other. The steps which each of these branches of the healing art have taken, as they meander their ways through twenty-one long centuries, are beautifully told; and the story makes fascinating reading. It is interesting to note how at one time medicine would be in the ascendant, and how at another surgery would eclipse the rival sister. During these long centuries there was a groping—darkly enough—after the truth, and these gropings were often deeply enshrouded in mysticism and superstition. But discovery upon discovery and master mind followed master mind break through the night, scatter the clouds, and usher in the morning of modern medicine and surgery with its hopeful rays. The whole story is most charming—far more charming than any fairy tale—because it appeals equally to the imagination and is far more real. To know where we are, at the present day, it is well

to recall the way we have come; and the way from Hippocrates to modern medicine and surgery is long, hesitant, doubting, stumbling, backsliding, advancing, receding, despairing, hoping, finally conquering. We commend this little book by Professor Allbutt.

PROF. ADAM WRIGHT'S WORK ON OBSTETRICS.

A Text-book of Obstetrics by Adam H. Wright, Professor of Obstetrics, University of Toronto; and Gynaecologist and Obstetrician to General Hospital, Toronto, Canada. With two hundred and twenty-four illustrations in the text. New York and London: D. Appleton and Company; Toronto. N. Morang. Price, \$4.50, net.

The advent of Professor Adam Wright's work on obstetrics has been looked forward to with much keenness and, indeed, with great hopes that it would fill a space still vacant amongst the many text-books extant on this subject; and now, after very careful perusal of the book, I am able to say that my hopes have been fully realized. The profession in Canada and, more especially, those in Ontario where the author is so well known as a competent teacher and experienced practitioner in midwifery, will, I trust, consider their library incomplete without a copy of so excellent and practical a work, as is now presented to them, on the all-important subject of obstetrics.

I trust it will also stimulate others of our Canadian physicians who have the taste and ability, to write on other matters medical. I have all along felt Canadian physicians were stading in their own light in not entering the field of medical literature, as we have a host of men who can edit works on medical subjects as capably as men in other places. The book is written in a clear, simple, but thoroughly practical style, up-to-date on all points, both in practice and theory, and yet so simple that he who reads can understand.

The first three chapters, dealing with the anatomy of the pelvis and the physiology of the embryo, in my opinion, might as well have been left out entirely, though the author only deals with them very lightly. It is customary in all text-books on obstetrics to take up these subjects and yet I could never see any reason for it. By the time the student is old enough in his medical course to attend lectures on midwifery, he has already studied these branches in previous years and is supposed to know them. It is simply an old practice being perpetuated. However, it in no way detracts from the other chapters which are so ably dealt with.

It is not expected that a reviewer of any work on medicine, while adopting the work as a whole, does not hold some personal views a little different from the author on some points in treatment.

The work is printed in excellent type, clear and easy to read. I hope this work, because of high standard and excellence, will become one of the recognized text-books, as it is admirably suited to the student's wants.

I heartily congratulate the author on the admirable work he has given us, and trust his efforts will meet that hearty response to which he is justly entitled.

J. ALGERNON TEMPLE.

GYNECOLOGY—MEDICAL AND SURGICAL.

By Henry J. Garrigues, A. M., M. D., Gynecologist to St. Mark's Hospital in New York City; Consulting Obstetric Surgeon to the New York Maternity Hospital; Consulting Physician to the New York Mother's Home and Maternity; Honorary Fellow of the American Gynecological Society. Honorary Fellow of the Obstetric Society of Edinburgh; Honorary Member of the College of Physicians of the German Dispensary; ex-President of the German Medical Society; formerly Professor of Gynecology and Obstetrics in the School for Clinical Medicine, and Professor of Obstetrics in the Post Graduate School and Hospital. With, three hundred and forty-three illustrations.

Among the many valuable productions on this important subject, this concise work of 461 pages is destined to occupy an enviable position. It does not pretend to be an exhaustive treatise on gynecology, but is written chiefly for the student and general practitioner, and they will find in it a very valuable and reliable guide in the study and practice of this branch of their profession. The work throughout bears the imprint of a master hand of wide practical experience. The earlier chapters are very clear and definite in expression and cannot fail to be exceedingly helpful to the younger workers in the gynecological field. The concluding chapter on "Diseases of the Rectum and Anus" gives the work a much wider range of usefulness than is generally obtained in productions on this subject.

MISCELLANEOUS.

AN EXCELLENT GERMICIDE AND INTESTINAL ANTISEPTIC FOR TREATMENT OF TYPHOID FEVER, DYSENTERY, DIARRHEAS AND OTHER DISEASES OF BAC- TERIAL ORIGIN.

That Acetozone is a valuable germicide is demonstrated by its effects upon typhoid bacilli and cholera vibrios in river water. In their experimental work, Freer and Novy (contributions to Medical Research,

p 107) made the following tests: (a) A cylindrical glass-wool filter was prepared, and on it was placed a layer of Acetozone crystals, about three cm. thick. A bouillon suspension of typhoid bacilli passed once through this filter yielded a sterile filtrate, while control tubes gave the usual abundant growth. (b) A liter of tapwater was sterilized by heat, and when cool a suspension of cholera or typhoid germs added, the experiment being repeated several times. Ten or twenty milligrams (one-sixth to one-third grain) of Acetozone was added, and after thorough shaking portions of the liquid were taken out and planted in bouillon and agar which was plated. In each instance the cholera germs were destroyed completely in five minutes, and the typhoid germs in fifteen minutes, by the extremely small quantity of Acetozone used. From the above experiments the authors draw the conclusion that pathogenic organisms are destroyed by extremely small amounts of Acetozone. Therapeutically Acetozone is being very widely and successfully used in the treatment of typhoid fever, intestinal diseases, notably diarrhoea, dysentery, cholera, in gonorrhoea, suppurating wounds and infectious processes generally. It is prescribed in the saturated aqueous solution which is prepared by adding fifteen grains of Acetozone to a quart of water, shaking thoroughly, and setting aside for a couple of hours to hydrolize. Messrs. Parke, Davis & Co., who prepare Acetozone, are sending out printed matter to physicians containing reports of very gratifying results from the use of this interesting compound. Any physician who has not received a brochure can obtain one on request.

THE USE OF GLYCOZONE IN A FEW GYNECOLOGICAL CASES.

By O. H. POWELL, A.M., M.D., St. Louis, Mo.

Prof. Principles of Medicine and Clinical Medicine, Barnes Medical College, St. Louis, Mo.; Alternate Physician St. Louis City Hospital; Physician in Charge Oblate Sisters of Providence Hospital; Centenary Hospital, Department Diseases of the Chest, Etc.

(Abstract from *New England Medical Monthly*)

It is surprising how physicians fall into habits regarding the use of certain agents in their practice, and how loth they are to resort to something new. No doubt this fact exemplifies the maxim: "Be not the first by whom the new is tried, nor yet the last to lay the old aside." This saying, were it put into active practice, would interdict the use of any new drug or remedy, as from the very nature of things a leader must be acknowledged, and that leader would himself violate the above maxim. In the treatment of uterine and ovarine diseases the well-known glycerole of tannin tampon, or the use of glycerine and Goulard's solution, or

glycerine with other astringents, has been for years recognized and appreciated by gynecologists over the entire world. In the clinics solutions of these agents are ever at hand, and habitually are ensconced into the vaginal canal with very little regard as to the scientific results that will accrue. It has often occurred to the writer that many of the solutions used by gynecologists favored the development of bacilli, and no doubt contributed in no small degree to the lighting up of attacks of pelvic peritonitis so frequently encountered by gynecologists. Glycerine no doubt is without a peer in successfully treating a long range of diseases that afflict women, as the well-known hygroscopic qualities of the remedy bring about a local blood-letting from the hyperæmic structures which, when followed by hot douching, is usually relied upon to reduce many inflammatory complications of the uterus and its adnexa. Not being satisfied, for the reasons above given, with the usual formulæ of glycerine in gynecology, a sample bottle of glycozone which came to my desk several months ago, although not referred to in the treatment of diseases of women, appealed to me. Accordingly, in view of the highly oxygenated properties of the remedy, which I believed would necessarily possess bactericidal properties, I was induced to try glycozone in my gynecological practice; the results were so pronounced, and the beneficial influence of the remedy so decided and permanent, that I have for several months past persistently resorted to glycozone in preference to anything else in my local work. I will outline the following clinical cases as indicating its usefulness in the conditions stated :—

CASE I.—SUBINVOLUTION UTERI CONSEQUENT TO MISCARRIAGE.

Mrs. Ella McL., aged 28; suffered a miscarriage at the end of the fourth month, following a severe fall from her carriage. Ergot was used regularly to check a tendency to recurrent and continuous hemorrhage. Curettage was first employed, the uterus thoroughly washed out with carbolic solution, and then a cotton wool tampon of glycozone pure pushed up to the cervix uteri. The uterus at the time of the first application measured five and a half inches in depth, subinvolution of the organ being most marked. On the second day, the tampon was removed, and the uterus found to have become reduced in size at least one inch. This beneficial influence of the glycozone continued unremittingly thereafter until at the end of eight days the uterus measured but two and a half inches, and a cure of the patient was complete.

CASE II.—EROSION OF THE CERVIX RESEMBLING EPITHELOMA.

This case occurred in a married woman, aged 35, the mother of four children. The ulcer of the cervix had a most suspicious appearance,

involving the left half of the neck and passing upwards on the cervix proper; it was in size about as large as a ten cent piece. I concluded to try glycozone on the tampon for a few days. Encouraged by my success with glycozone I reapplied the agent, and soon discharged her, entirely cured of the formidable appearing ulcer.

CASE III.—GONORRHOÆAL INFLAMMATION OF THE CERVIX UTERI, AND EXTENSION TO THE ENDOMETRIUM.

An examination with the speculum revealed considerable purulent secretion emanating from the vagina, and the blood vessels of the adjacent parts greatly congested; the cervix uteri was denuded over its entire circumference adjacent to the os of its epithelium, looked angry, and bled readily during the examination; also, from the uterine canal thick pus was freely emanating. A microscopical examination disclosed large numbers of gonococci. The vagina was first deluged with a hot bichloride solution one to three thousand, the uterine cavity was also cleansed with the solution. Following this procedure pure glycozone was injected into the uterus by instillation, and the same remedy freely applied on absorbent cotton to the entire vaginal walls and the cervix uteri, after which a cotton tampon saturated with glycozone was left in position. The vaginal gonorrhoea was quickly dissipated in three treatments, but it required three weeks to effect a cure of the disease that had invaded the endometrium.

CASE IV.—CERVICAL LACERATION FOLLOWING INSTRUMENTAL DELIVERY.

This lady, who was almost twenty years of age, whose pelvis was slightly kyphotic, gave me great difficulty in delivering her of a comparatively large child by means of forceps.

The cervix uteri lacerated from side to side. The rent was at once which upon examination I found emanated from the uterus which was sudinvoluted, over four inches deep, and no doubt resulted from the cervical rent. Glycozone was at once applied upon a wool tampon, and after about four such applications the disturbance was entirely eradicated.

CASE V.—RETROFLECTION UTERI, WITH PROLAPSUS OF THE OVARY IN DOUGLAS'S CUL DE SAC.

This patient, who was the mother of a large family of children, slipped one morning promptly aborting. The placenta was readily ex-

tracted but the fundus uteri was found a few days later to be in the posterior cul de sac. Readjustment of the prolapsed structures was attended with so much pain that it was deemed inadvisable to accelerate matters. Accordingly pure glycozone was pushed up in the posterior vaginal sac on a tampon, and left in situ over night. The following morning all tenderness had disappeared, and the patient being placed prone; a second tampon of the glycozone not only removed whatever tendency to hyperæmia resulted but likewise the tampon supported the uterus in the genu pectoral position, the displaced organs were readily re-structured.

CASE VI.—CHRONIC ENDOMETRITIS WITH PROFUSE LEUCORRHOEA.

This case was one of long standing; and curettage had been twice performed, the old trouble invariably recurring. I concluded it would be a good case to test the instillation treatment of glycozone upon, and accordingly used this remedy alone in that manner, together with its local application upon the tampon to the cervix uteri. This lady improved at once and after the very first application. I had her under my care and re-applied the remedy for about two weeks all told; she not only recovered absolutely during the time stated, but over three months have now lapsed with not the slightest evidence of any recurrence of her former difficulty.

ANTI-PHLOGISTINE V. POULTICES AND MUSTARD PLASTERS.

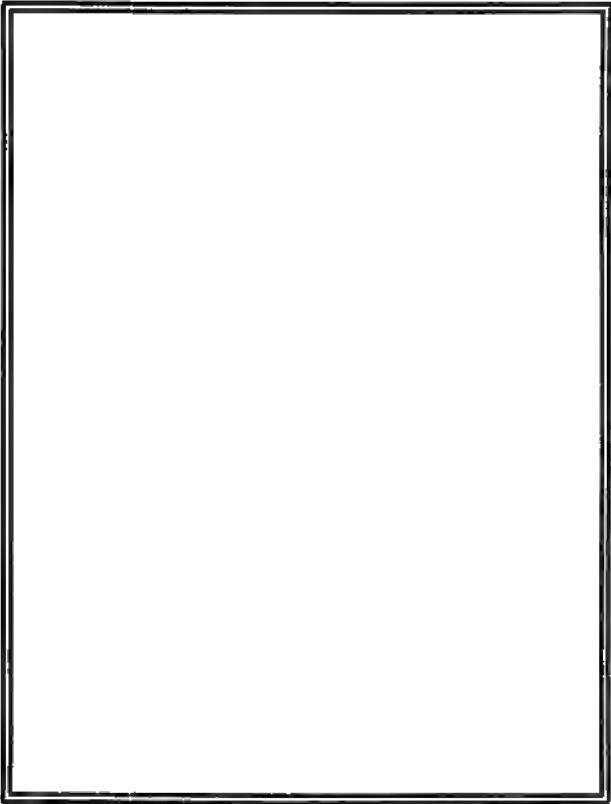
"So you have decided to get another physician."

"I have," answered Mrs. Cumrox; "the idea of his prescribing flaxseed poultices and mustard plasters for people as rich as we are!"—Ex.

Quite right. If he had been up-to-date, he would have used Anti-phlogistine, whether his patients were rich or poor.

TREATMENT OF HAEMOPTYSIS.

Haemoptysis depends on a solution of continuity of the pulmonary vascular wall, and upon an intra-vascular pressure at the bleeding point which exceeds the extra-vascular pressure in the tissues. The first of these causes we cannot affect, the second has been treated by drugs causing pulmonary constriction; ergot, digitalis, adrenalin, etc., but without much success. The same result might be achieved by reducing the force of the heart, and aconite has been used with some success. Hare tried the use of a method of dilatation of the systemic arterioles by amyl-nitrite, causing, as it does, a fall of blood pressure: the result was very satisfactory.



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PARIS, ONTARIO,
PRESIDENT OF THE ONTARIO MEDICAL ASSOCIATION, 1904-5.

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PRESIDENT'S ADDRESS.*

By W. BURT, M.D., Paris, Ont.

LADIES and Gentlemen,—I cannot fully express myself for the honor I received at your hands at our last annual meeting. My voice is not strong enough to express my appreciation of your good will towards me and my confreres from the West. I feel my inability to do justice to the position to which I have been exalted, and I will crave your patience and sympathies for a brief space of your time.

I cannot vie with those who have preceded me in this honored chair: I can only strive to emulate them. We have already an honored list of Past Presidents, and, while the time now is short when I will be with them, I feel that my interest in this Association will ever increase as the years roll by, and I can never for a moment believe that our Association will ever wane, but that its usefulness and power will increase from year to year, and that it will be a standing authority on Provincial matters concerning our profession.

I am sure we may feel proud to-day to celebrate the 25th anniversary of our existence. We have arrived at the quarter-century mark in a very healthy and prosperous condition, and I do not fear—I feel I can be prophetic—that those who will celebrate the fiftieth anniversary of this Association will, when it arrives at the half-century mark, find that medicine has made even greater strides during the second quarter than during the first and that our Association will be credited with promoting in no small degree the welfare of the people. I feel that we here in Ontario would be unworthy of our noble calling if we had not brought into existence the Ontario Medical Association and given it our encouragement and support. Among our neighbors to the south, the people of the United States—I came near saying Americans, but, as is well known, we, as Canadian, claim that title ourselves—the State Association is a great factor in the building up and ennobling of all the higher ideals of life and is considered one of the best authorities on all matters pertaining to the control of the profession and the health of the people. In this I feel we should vie with our neighbors, and not be behind in any matter pertaining to the health of the province. There is no reason why

* Delivered before the Ontario Medical Association, June, 1905.

Ontario should not be to the fore in the fight against the enemies of life. There is much that is of a provincial nature—the work of the Provincial Board of Health, the care of the insane, the public hospitals, the relief of inebriety, medical legislation, including medical education. A matter of no little importance, too, as it brings the members of our profession into closer touch with each other. It is to the benefit of the individual member. He cannot fail to have his mental horizon extended—in union there is strength.

It has been said that surgery has about reached its limit and that there is little left for us to do in the way of improvement. Surgery is in as active a stage as ever. While much of the work that is being done now appears marvellous compared with the work of a quarter of a century ago, there is no doubt, and many of our surgeons recognize it, that there is still in sight a great field for improvement, and that we may be looked upon as Lilliputians compared with those who will do the work at the end of the next quarter or half century. While our knowledge is actually great, it seems little after all, when we consider the possibilities of the future. When the tubercle bacillus was made known to us we were congratulating ourselves that the white plague would disappear forever. Although we are wondrous wise, we have no reason as yet to boast of any great wisdom. No matter how much we quarantine the microbes they still produce—I say this advisedly—such diseases as the white plague, enteric fever, the infectious diseases and many others, and by their flank movements get in their deadly work. On the part of the physician it will always be a fight to the finish—the French proverb, *Après la mort le médecin*, expresses it aptly—on the part of the microbes a fight to the death. The discoveries that have already been made impress us only too strongly that research work must be pursued on a larger scale than ever, and our multi-millionaires, benevolently, philanthropically inclined, in their later days at least, could not do better than aid in the great work of research. While we can felicitate ourselves for much that has been done in the matter of serum treatment, especially in diphtheria and rabies, we may look forward to even greater things; great as these advances seem, the possibilities seem greater. The surgeon, as is well known, is too often the victim of so-called blood-poisoning. It has claimed as its victims many of the most skilled and cultured of our profession, besides placing many others near the brink of the great beyond. It is needless to mention names, they are well-known to us all. There are many living to-day who feel that they have narrowly escaped the jaws of death—I might say the jaws of the microbe—and only a vigorous constitution, or a rather attenuated attack of the microbe, has spared them a few years more. I appeal again to the philanthropist to assist us in our work of research. There is no fight on now of greater import than the battle against the disease-pro-

ducing microbes. As it is, I rather think the microbes have a little the best of it, perhaps a good deal the best, but I hope ere long through the work of research, aided and abetted by the lovers of humanity, that the microbe will suffer defeat, in fact be annihilated, or at least rendered harmless. And while I am on the matter of research work, let me pursue it a little farther. It is not our ignorance of the habits of the microbe that many diseases are prevalent; take for example the somewhat common disease of diabetes mellitus—how little is known concerning its origin, its prevention and successful treatment? And again, take the epileptic—there number is legion. There are being, very properly, sanatoriums established for their care and maintenance. We are well aware that the great majority of epileptics are epileptics to the end. These are simply examples to show what a great field there is for research work other than what the microbes give us. It would be well if many of our clever gold kings would study medicine, and pursue with their surplus wealth the great field of research. I think it would be better if they would use it for the establishment of schools for research work, wherein those who are known in our profession for their abilities may pursue the work. We are well aware that a school of this kind has been established in Washington by the king of the iron industries. While I am not jealous of our neighbors—I am indebted very much to them—I would like to see in this fair province of ours a school for research work in medicine that would be untrammelled, unfettered by the want of financial support. This is not unreasonable. It was through the air of Ontario that the telephone wire first came into use—not in one of our large centres, but from a county residence, Tutela Heights—to the now City of Brantford. I can recall how I was thrilled when listening in the first Brantford Office to music produced at the country residence of Prof. Bell.

Canadians have already done considerable research work. While it may be that research work can be carried on in our larger cities to greater advantage, it has been well shown that in preparing the student for research work many of the smaller schools do as efficient work, if not more so, than the larger ones. Personal supervision of the teacher is one of the greatest helps in preparation, and this, as a rule, is better carried out in the smaller schools. However, our larger schools, by increasing the staff, are giving recognition to the fact that individual attention is one of the greatest helps to student life. Many of the improvements and advances in our profession have not been due to the laboratories of our Universities, but have been thought out during the daily rounds, let me say, of the country physician. I ask you to recall Ephraim McDowell.

Not to be behind our smaller cities in Ontario, Toronto, everyone will be glad to know, is about to make a great effort to be up-to-date in

the matter of hospital extension and library work. There is no doubt that, if successful in their undertaking, research work will receive a great impetus. While it may seem a matter of great renown for him who succeeds in the field of research and gives to the world something new, it is no less praiseworthy for him whose lifework consists in administering all that is latest and best for the relief of human suffering. There may be a scintillation of truth in the fact that if a man has little desire to enter the field of research before middle life he is not likely to do much after, but it is an incontrovertible fact so far as the application of what is already known to be beneficial, to be helpful for the relief of suffering humanity, the powers of the physician, his experience, his judgment, his power of discernment, increases as the years roll on and do not cease until disease or a ripe old age superannuates him. The author of "Bonnie Brier Bush" tells us that it created a scandal in his country for any citizen to "slip awa" before sixty, and that persons above ninety were understood to be acquitting themselves with credit and brushed aside the opinion of seventy as immature.

You will agree with me, I am sure, that the sum of human happiness could be materially increased by the stamping out of some preventable disease—diseases that may be totally avoided, diseases that are under the control of the individual and society. The gynecologist, the genito-urinary surgeons, the neurologist, will tell you that a great deal of their work is due to the gonococcus and syphilis. What diseases more loathsome? You will admit, I am sure, that these are preventable diseases. What diseases are more contagious? What diseases leave their dire results in the human system more than these do to be handed down to the third and fourth generation? And yet they are preventable, wholly preventable. It is not for me to discuss the phases of social life that produce these, but in many instances useful, innocent lives should be protected. It is true in the practice of our profession, in operations on the syphilitic numbers have been inoculated and lives of usefulness marred. What more obnoxious than a syphilitic with mucous patches or an epithelioma on his lips, or a specific sore throat, offering his pipe to a comrade or participating in the Communion in any of the Christian Churches where the individual cup is not used. I feel sure if the laity could understand the disastrous results of oral sepsis, there would be no dissenting voice in the use of the individual Communion cup. The physician can evidently curtail much misery, but he needs the help of the public to stamp it out altogether. It needs a greater concern on the part of everyone in social and moral reforms, a cultivation of higher ideals. You may attribute it to ignorance or want of education. These are but scapegoats. If it is due to want of education, then let me say that the people of our large centres are lamentably ignorant, and

just here I beg to state in my opinion the ends of justice would be as well secured by taking the oath with the hand uplifted, as that impure method of kissing the Bible—a Bible that has done untold service. What more impure ? To return again to the disease-producing germs, a well-known characteristic of the microbe is that it is cowardly, it will not attack many subjects unless their systems become weakened, as is the case of many young people, from want of proper nourishment, from living in closely-crowded, ill-ventilated tenement houses, or from working longer hours than is consistent with a healthy system. It is acknowledged that these are factors that go to swell the victims of the white plague. If people were to fall in love with fresh air, sunlight, wholesome food and cleanliness in their youthful days, and regulate their hours of work as much as many do after contracting the disease, the demand for sanatoriums would be much less. A great interest is being taken in the erection of sanatoriums for plumonary phthisis, and, while I hope that it may continue, I feel that the work in this direction should grow less and less from year to year as the death rate becomes reduced. The great arteries which keep up the supply of consumptives, pulsate stronger and stronger in many places. If ever we can boast ourselves a great people, and vie with other nations, if ever we can sustain the reputation of our country for prowess, for culture and refinement, it will be by so altering, so modifying the strenuous life that we live that we shall not permit any feeding grounds, any culture grounds, for the microbe that we shall be able to remove all sources of the dread malady. It does seem that while great efforts are being made for the cure of the afflicted, our thoughts, our energies, are not sufficiently concentrated and aimed at the faults of our national life in many respects.

You are all familiar with the harrowing details of the lives of the children in the coal regions of our neighbors to the south during the great strike of the miners three winters ago. I need not repeat here that these mines were veritable hot-beds for the spread of the white plague. The coal mines are not the only culture grounds for the dire disease. I may refer you also to the culture beds of the cotton mills of the North and the South, where child labor has been and is much in evidence. But why, you may say, am I talking about my neighbors ? Are we as a Province free from the culture beds ? As you are aware, I belong to a town which is noted for its woollen industries. It possesses the largest woollen mills of our fair Dominion. I would like to say that our civilization, our Christianity, was of that type that we could boast that we are abreast of other people ; other nations, that we are living in a land where there are no culture beds—no culture grounds—for the white plague, in a land where child labor is unknown, and where our neighbors cannot point at us the

finger of scorn. My fervent prayer to-day is would it were so. After all the churches that we see towering above us, the magnificent works of the architect, after all the efforts of our various leagues with their Christian influences, after all the sermons that are preached and prayers offered up, to say that we are living in a land where child labor exists is to say that a most lamentable condition of affairs exists, and that our neighbors can point at us the finger of scorn, and that we, too, lack much that might strengthen and support the props and bulwarks of a great country. We are much indebted to some of our noted women for some of the greatest reforms the world has ever seen. What was it, I ask, moved the world to the abolition of slavery more than anything else, and made Lincoln free the slaves, if only as a matter of military expediency, if not the writings of the author of *Uncle Tom's Cabin*? No one has written more strongly or more pathetically on behalf of growing childhood than Mrs. Browning in "*The Cry of the Children*." I will give you but two lines :

"And they look up with their pale and sunken faces
And their looks were dread to see."

And yet there are those who cannot see that the factory labor of children is slavery. In greater New York, we are told, some sixty thousand school children go hungry every morning to school. It is needless to say they are unfit for their work. In great London, we are told, the number is vastly greater. In Toronto—well the latest report has not been handed to me. In regard to this matter a prominent weekly paper, published in Toronto, states: "Of the many terrible things in some of our great cities, this is one of the most awful to contemplate." I need not enlarge on this subject. The results are self-evident. Is it any wonder that many systems are vulnerable to attacks of the white plague and other diseases? The work of prevention seems almost insuperable, but it should not be so. If we could but eliminate from the make-up of the individual and our nations' representatives the words "grasp," "graft" and "greed," and we possessed more of the altruistic spirit, our national life would be in a more healthy condition and the jails and the tombs would have fewer occupants. If our children are starved, our nation cannot be well developed. We must build up a nation by building up the individual. We must have a sound body for the in-dwelling of a sound mind. Inasmuch as a nation is made up of individuals, as matter is composed of molecules, the perfection to which we bring each individual goes far to establish on a firm basis, the bulwarks of a nation. Any nation that will permit or encourage child labor is bankrupt, morally, socially and politically. With the lamentations of the mother and the daughter ringing in our ears, may Canada show forth

to the world her greatness, her godliness, and emancipate this fair province of ours from the disastrous consequences of the white plague, and may we be first and foremost in this respect among the nations of the earth. It would go a long way to strengthen the bulwarks of our nationality and help to produce a healthy, happy and contented people.

I would not like to admit that in the early history of the world physicians were a much better class than exists to-day, but it is indisputable that in olden times people lived as many hundred years as they now do tens. How is it? I would not like to say that they had better Boards of Health. I can only answer that there is a Divinity who is the author of natural laws, that natural laws are Divine laws, that there may be an alteration in our well-known laws governing youth and old age by the Divine will, and that the cycle of life of the present time, as compared with that of the olden times, is a vivid illustration of the fact. Natural laws are God's laws, and if the Almighty sees fit to change the laws, the properties of matter, it will be done as it was done in the shortening of the natural period of our lives.

I feel that I would not be doing my duty if I did not call your attention to a most pressing matter, that of the indigent and wealthy inebriates. This subject should not be disregarded or passed over lightly. The Ontario Society for the Reformation of Inebriates should receive our strongest support, and I sincerely hope that the Government of to-day will see its way clear to aid this Society, and help to carry on the work which it is endeavoring to accomplish. While here again the prevention of inebriety should not be lost sight of, a great advance would be made in the citizenship of our Province if we were to put in force the measures adopted by Great Britain and the United States. It is well recognized that what many an inebriate needs is to be placed where he cannot have the source of his trouble, and be treated with that sympathetic kindness that he needs, and he will be grateful to the help given him. No one can help feel, if the wishes of society be carried out, another strong prop would be placed in our nation's manhood. But I would go farther—I believe that the wealthy inebriate would be very grateful if taken care of. The inebriate in many cases only requires to have the proper restrictions enforced. The inebriate himself frequently desires the restrictions, and there are cases where it may be said that the inebriate has lost his self-control, has not sufficient moral force left to impose the restrictions himself, and what is needed is that he shall be taken charge of by his friends and the restrictions carried out for him. This cannot, as a rule, be done without adopting some one or all of the measures the Society has proposed. I hope that the indefatigable

worker of the Society, Dr. Rosebrough, and the other members, will soon have the satisfaction of knowing that their efforts in this direction will be crowned with success.

Another matter that should not be lightly passed over is lodge practice. In regard to lodge work I have long since expressed my emphatic views. Some may say that I should not express myself, because I have never taken up lodge practice—it is not necessary to practice an evil to know the evil. The so-called free attendance is no doubt a drawing card on the one hand, and the prospect of an immediate clientele of patients, an alluring bait to the young practitioner on the other. My own opinion is that lodge practice has no redeeming features. Not many years ago the Supreme Chief Ranger of one of the fraternal societies, in one of his addresses, stated that the free medical attendance—I do not use the term “free” absolutely—saved his order some millions of dollars. I only wish to state that this would have been a nice fund for the fatherless and the widows of the deceased members of our profession. It is only too well known that many in our profession, faithful workers during their lifetime, have left but a pittance to their loved ones. I do not hesitate to say that both the fraternal societies and the physicians would be on a more enduring basis, on a more solid foundation, if the societies had their benevolent funds with the lodge physician left out. It is so in many, if not all, of the United States, and from them we might well take a lesson. And just here I would wish to state what will commend itself, I am sure to every one, that in many cases a trained nurse would be engaged by the order instead of drafting members who have been at work all day to do more work at night. The interest of the patient demands it, and just here let me state that a great deal of the success of the physician is due to the trained nurse. The trained nurse has come to stay. If anyone wishes to pursue this subject further I will ask those of you who have not read the last chapter of Dr. John Beattie Crozier’s work on “My Inner Life,” to do so. There you will find a better statement than I can give you, and in the language of a well-known writer, of the disastrous results of lodge work or club practice as it affected him in his home in England. Dr. Crozier is a graduate of Toronto University of ’72, of the same year as our lamented Zimmerman. Our Osler was of the same year, but left us for McGill at the end of his second year. Dr. Crozier, as many of you are aware, was an old Galt boy, and is now receiving an annuity from the British Government for his work as a philosopher. Crozier’s work at the G.G.S. help to stimulate many a less apt student. He has done much research work, but it was hunting for an ideal. Had he turned his attention to medical research I have, no doubt, no microbes would have kept out of his way. I think, however, you will find his writings in regard to lodge

work solid. Crozier is one of Canada's famous sons, of whom we have great reason to be proud.

A short reference to another subject and I am done. You are well aware that there could not be a more important subject than public hygiene, and especially that part of it which comes under school hygiene. It needs a great deal more attention than has been paid to it. The hygiene of the schools is in a somewhat crude state, and a little more attention would bring the sanitation of our schools up-to-date. Our knowledge of what is required is not deficient. It seems a matter of neglect, pure and simple. A minister of health, which we have not yet, would be one of the most important portfolios that any government could have. Good health is one of the greatest assets that an individual or a government can possess.

Many subjects I must leave untouched. It is well understood that in the medical profession there must be a division of labor, but whatever department we pursue, we must do so with "prudence, promptness and patience." These are the graces of the soldier, so well described by Miss Harris. They may well be the graces of the physician, for the practitioner of medicine, in its widest sense, is a soldier always, a combatant, fighting the enemies of life, striving to keep death as far off as possible. Even on the battle-field he never shrinks from danger, he is doubly, thrice-fold, a combatant—a parting word to doubting ones. The thought that the cycle of life, changed as it is to a short period, is manifestly due, not from any want of skill on the part of the medical profession, but to a Divinity, to God alone, does not need a very strong faith to believe. It is proof itself, and if we believe in this great change of the cycle of life, why can any one take exception to the Immaculate Conception, the Resurrection and the Ascension? Contrary to much that has been said of the physician's belief, he has certainly been one of the strongest supporters and exponents of Biblical history. We have been placed here to work out many problems, and if we make use of the means of the research that has been given us, the mist and the clouds which hang over us, may be cleared up and it will be given us to know much of what is seemingly mysterious. We have no conception of such phrases as *boundless space* or *in the beginning*. It may be given us to explain much of what is now mysterious, but it will only be done by honest, faithful work, not by the methods of so-called Christian Scientists, but by the labors of those who will enter the great field of research work into nature's laboratories and the special laboratories for research.

SURGERY OF THE STOMACH FROM THE STANDPOINT OF THE CLINICIAN.*

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THERE are many reasons why surgery of the stomach should be more and more interesting to the clinician. Chief among these is the fact that with the increasing clinical experience in this field, it has become possible to perfect the diagnosis of conditions far beyond the degree to which this could be done only a few years ago, when it was possible to actually confirm diagnosis anatomically only in those patients who could be subjected to an autopsy. In the vast majority of cases the diagnosis was made upon theoretical grounds. The patient was treated and improved temporarily; during a subsequent attack some other physician made the same or a different diagnosis, which again could not be proven anatomically, the difficulty arising from the fact that no one could prove or disprove the diagnosis in either case.

The moment a case becomes surgical, however, this difficulty is abolished, because the diagnosis can and must be proven to be right or wrong.

There is much ante-mortem pathology in diseases of the stomach, as well as in diseases of all the other intra-abdominal organs, which can be studied properly neither post-mortem nor ante-mortem, unless the organ is exposed to view; and no sooner has this been done in a large series of cases than the diagnosis of the condition becomes much simpler and easier and gains greatly in certainty.

Gastric Ulcer.—The condition which primarily or secondarily leads to the greatest amount of stomach surgery is the ulcer. The operation may be indicated, 1. Because of the painfulness of the ulcer; 2. In order to control (a) acute or (b) chronic hæmorrhage; 3. In order to prevent secondary condition such as (a) perforation; (b) peritoneal adhesions; (c) pyloric obstruction due to cicatricial contraction; (d) hour-glass stomach; (e) gastric dilation due to obstruction; (f) starvation; and last but not least, (g) implantation of carcinoma in the ulcer.

Diagnosis of Ulcer.—Since the presence of gastric ulcer primarily is the beginning of so many of the surgical conditions, it is important to recognize this lesion early in its development.

The most constant symptom in the presence of this lesion is pain. This is usually located below the tip of the sternum, is increased upon pressure, and upon taking food. The patient can usually tell which food will cause the pain to become severe. If the ulcer is on the posterior sur-

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face of the stomach the pain radiates into the back, usually to the left of the median line and up as high as the lower end of the scapula.

Very commonly the pain accompanying the presence of gall stones is mistaken for the pain due to gastric ulcer, but it is usually not difficult to differentiate between these two, because the former is increased upon pressure at the point between the end of the ninth rib and the umbilicus, a point first located by Mayo Robson, while the latter is increased upon pressure in the median line.

Again, in case of gallstones the pain in the back extends to the right at about the level of the tenth rib, while in gastric ulcer it is greatest in the median line or to the left of this and higher up.

The stomach contents are usually exceedingly acid in the presence of gastric ulcer, and there is an abundance of free hydrochloric acid present unless the ulcer has become carcinomatous. It should, however, be stated here that the chemical examination of stomach contents must always be looked upon only as of value in corroborating diagnosis, made as a result of a study of the history and physical examination. Mayo and Graham have demonstrated this fact conclusively in a large series of carefully studied cases.

The history usually states that the patient has felt distress upon eating for a considerable period of time; that there has been eructation of acid stomach contents; that this is much more severe when certain articles of food have been taken; that the patient is much less comfortable when carefully following some diet which experience has taught him to select.

Quite frequently the feces are observed to be black from the presence of partly digested blood from slight gastric hæmorrhages.

So many of the patients have, however, received subnitrate of bismuth as a remedy, or some form of iron, that care must be taken not to confound the effect of these remedies upon the color of the stools with that of hæmorrhage from the gastric ulcer.

Frequently these hemorrhages have not been observed, but still the loss of blood has been sufficient to cause a marked anemia, hence this condition must be considered in connection with the other symptoms and the history. In patients who are severely anemic and who suffer from some form of gastric disturbance, one can usually demonstrate the loss of blood from chronic ulcer by a careful study of the case. Fuetterer has demonstrated that by overcoming this anemia by careful dieting, many chronic ulcers will heal, which without especial attention to this feature seemed quite incurable under non-surgical treatment.

With careful internal and especially dietetic treatment, a vast majority of all cases of ulcer of the stomach which have been recognized early, can undoubtedly be healed permanently, if not only the immediate

treatment, but also the after treatment is carried out carefully and conscientiously. That this can be actually expected in these cases has been shown in a large number of patients suffering from this condition.

But there are many of these cases which apparently recover only to relapse again and again. Many of these go from one physician to another, each time temporarily improving or recovering.

Mayo has found that most cases which ultimately come to operation have been apparently cured a number of times and our observations fully confirm his report.

It is well to bear in mind this element of the history of any given case, because it should have a distinct bearing upon the choice of treatment in the future. Any case in which there has been a number of apparent cures with subsequent recurrences of the ulcer should properly receive surgical instead of medical treatment in the future.

Differential Diagnosis.—The most common condition which is mistaken for gastric ulcer is disease of the gall bladder, especially gall stones or sand. Next in order comes chronic appendicitis with acute exacerbation during which the pain is usually referred to the region of the umbilicus. In this case the pain is lower down than in gastric ulcer, and it is increased upon pressure in the region of the appendix near McBurney's point.

Renal Calculus.—Has been mistaken for gastric ulcer. In this case the urinalysis will usually clear up the diagnosis; moreover the pain is increased upon pressure over the kidney, and radiates downward and inward along the course of the ureter.

Duodenal Ulcer.—It is only the fact that ulcer of the duodenum is not very common, which makes the occurrence of mistaking this condition for gastric ulcer somewhat infrequent. This condition has almost exactly the same symptoms as gastric ulcer, but the point of tenderness upon pressure is over the middle of the right rectus abdominis muscle above a transverse line drawn through the umbilicus.

Volvulus.—In rare cases volvulus of the jejunum may be mistaken for gastric ulcer, but the violent vomiting containing bile soon after intestinal contents, but no blood, makes the differential diagnosis relatively easy.

Neurasthenia.—It is often very difficult to make a differential diagnosis between gastric disturbances due to neurasthenia and those due to chronic ulcer. This is especially true, because not infrequently neurasthenia results from the suffering, anemia, and inanition which is caused by the presence of a chronic ulcer.

It is quite likely that for several years to come, quite a number of patients suffering from neurasthenia due to other causes will be subjected to stomach operations as a result of erroneous diagnosis.

Any other severe intra-abdominal condition like intussusception, ruptured ectopic gestation, ovarian cyst with twisted pedicle, peritoneal adhesions either septic or tuberculous, may be mistaken for gastric ulcer. In a few cases I have seen an interesting condition which gave rise to a mistaken diagnosis of gastric ulcer. In these cases the great omentum had become attached by its free margin to some point in the lower portion of the abdominal cavity, the tubes, ovaries, uterus, bladder, the cecum or the abdominal wall. The tension of the omentum upon the stomach gave rise to symptoms which could not be distinguished from gastric ulcer.

In a number of patients in whom we had made a diagnosis of gastric ulcer with pyloric obstruction and consequent dilatation of the stomach, we found the pylorus unusually open and the duodenum dilated to from 2 to 4 times its normal diameter down to a point below the entrance of the common duct. Upon exposing the jejunum this was found strongly contracted in these cases.

The lymph nodes near the duodenum in these cases were usually enlarged, indicating lesions of the mucous membranes lining the duodenum. In these cases the pancreas is usually also enlarged, and the gall bladder is distended with bile together with mucous, sand or gall stones, and frequently all of these substances are found in the same gall bladder.

It seems reasonable to suppose that the obstruction at the point of entrance of the common duct into the duodenum or below the point must be primarily physiological in character, due to the irritation caused by the mucus, sand or stones in the gall bladder and duct.

The observations of Cannon and Blake which show that there is a physiological mixing process which takes place in the duodenum is extremely interesting in connection with this particular class of cases. Continued attention to these cases is likely to develop facts which will have great interest for the clinician.

Another condition of clinical interest has been observed in a considerable number of cases. It has been found that many cases of gastric ulcer have previously suffered from chronic, recurrent, or catarrhal appendicitis, usually with peritoneal adhesions to the appendix, or the cecum, or both, or with fecal concretions in the appendix; but always with some form of obstruction to the passage of gas. This pathological obstruction has resulted in a physiobstruction to the passage of the gastrointestinal contents through the pylorus, and this in turn had been the exciting cause of the gastric ulcer.

Clinically one can usually follow a very interesting sequence in cases of gastric ulcer which do not end abruptly by perforation or fatal hemorrhage, or by what is probably less frequent in cases in which the ulcer is at all advanced, by permanent healing.

At this point, however, I believe that it is proper to express the opinion that it seems most likely that a very large number of small ulcers heal so perfectly that it is quite impossible to demonstrate their existence either ante-mortem or post-mortem, and that there are few cases which go beyond this initial stage without healing, which will later heal permanently

Vicious Circle in the Development of Gastric Ulcer.—It is not uncommon to observe the following history in the development of gastric ulcer.

1st. There is severe pain two to four cm. below the ensiform cartilage in the median line. This may be more severe directly after eating, or only after eating certain things, or it may be most severe when the stomach is empty, and may be relieved by taking food, but its location is quite constant and the pain is increased upon pressure at this point. There is at this point no dilatation present.

2nd. In attempting to protect the ulcerated surface against traumatism there is a physiological obstruction of the pyloric sphincter. This obstruction may be increased in two ways: (a) There may be developed an indurated edematous area due to the extension of the ulcer or (b) as a result of the healing of the ulcer there may be formed a certain degree of cicatricial contraction which in itself will constitute an obstruction.

3rd. In order to overcome this obstruction the remaining portion of the stomach musculature will become hypertrophied.

4th. This is certain to be followed by muscular exhaustion and relaxation, and this will result in gastric dilatation.

5th. No sooner had this occurred than the pyloric obstruction is still further increased by the fact that the lower margin of the greater curvature is depressed far below the level of the pylorus, and all of the food must not only be forced through the already obstructed pylorus, but it must also be elevated to the level of the latter aperture.

The fact that in the normal stomach every portion is drawn to a higher level than the pylorus, as the organ is forcing its contents into the intestine, has been shown very beautifully by Bettman, and more recently by Cannon.

6th. In the meantime, another condition has arisen which will prevent healing. The obstruction together with the sacculation, gives rise to the accumulation of residual food in the dilated stomach, which undergoes decomposition in place of digestion. In this manner, all the fresh food is vitiated by being mixed with the decomposed residual food remnants in the stomach. In this manner, each successive condition makes the previous state of things more grave. In the meantime two other conditions have arisen which will serve to prevent the tendency of healing in the ulcer.

7th. Almost immediately after the beginning of a gastric ulcer, a great amount of mucus is secreted, apparently to protect the diseased surface. This, however, causes the food to become coated, and this in turn interferes with gastric digestion. This condition is followed gradually by the secretion of an increased amount of hydrochloric acid, which is undoubtedly the physiological remedy for facilitating the digestion of food covered with mucus. With the increasing acidity of the stomach contents, the chances of healing of the ulcer is greatly reduced, and its extension is practically certain, hence each one of the conditions in turn becomes more and more exaggerated, and conditions go from bad to worse, unless a radical change is established whether by internal treatment, or if this prove ineffective, by surgical operation. I have had an opportunity to verify these clinical observations in a very large number of patients suffering from gastric ulcer, and they are in keeping with observations of most clinicians, who have studied such cases extensively. These facts would indicate the importance of careful treatment at the very beginning of gastric ulcer in order to secure complete healing before any of the secondary conditions have arisen, and also the necessity of eliminating all of the primary causes of the lesion in every individual case after healing has taken place, in order to prevent a possible recurrence.

This is especially important, because each successive attack is more difficult to relieve permanently. The chances for permanent relief are more and more reduced, because each time some lesion will remain, which must lessen the resistance of the tissues, or increase, at least, to a slight extent, the difficulty of emptying the stomach.

It is likely, that with proper after treatment, especially as regards diet and general hygiene, it would be possible to reduce the number of cases of recurrence to a great extent. This would reduce the number of cases, which now properly fall into the domain of the surgeon.

Fuetterer has written most effectively upon this phase of the subject, and I am confident it is worthy of our most serious attention. This is true, primarily, because it would permanently eliminate all of the many serious sequelæ, which are now so common.

All of this would indicate that surgery of the stomach begins where internal and dietetic treatment of disease of this organ fails to give permanent relief. It also indicates that surgery, in order to be of value, must result in local rest and in the drainage of irritating contents of the stomach, in all non-malignant cases, and in the early removal of the growth in malignant cases. It seems reasonable to suppose that the most careful attention to diagnosis of non-malignant cases, and the surgical treatment of that portion of those which cannot be

relieved permanently by internal treatment, must result in a vast reduction of the number of malignant cases.

At the present time some form of gastro-enterostomy seems to have given the most satisfactory results. Mayo pointed out the fact, most emphatically, that the anastomosis must be located actually, and not only theoretically, at the lowest point in the stomach, in order to be safe and effective, and leave the patient free from regurgitant vomiting "Vicious circle."

Theoretically, there seems to be many arguments in favor of a posterior gastro-enterostomy, but practically the results seem equally satisfactory, provided the opening is sufficiently large, and is in fact, at the lowest point of the stomach.

A method has not yet been found, which completely satisfies all reasonable demands for performing gastro-enterostomy. I have had the time to look up only those of my cases of stomach surgery, which I have treated in the Augustana Hospital, hence I will speak only of these in this paper. But the methods of the results have been the same in the cases I have treated in the other hospitals, hence this is of no material importance. The following table will give a convenient idea of these operations :—

	Total.	Recovery.	Died.
1. Incomplete Gastrectomy	5	4	1
2. Pylorectomy	9	8	1
3. Gastro-enterostomy, Murphy Button—			
Malignant Cases	24	16	8
Non-malignant	10	9	1
4. McGraw Ligature, Gastro-enterostomy—			
Malignant Cases	22	16	6
Non-malignant	65	59	6
5. Gastro-enterostomy, other methods	12	10	2
6. Perforated Gastric Ulcer	10	2	8
7. Gastrostomy	4	2	2
8. Exploratory Laparotomy for Carcinoma of Stomach	32	24	8
Total	193		
9. Ulcer of Stomach, not operated	66	60	6
10. Carcinoma of Stomach, not operated... ..	49	...	15
Patients returned to their homes unimproved, 34.			

It will be seen from this that most of the operations were performed for the purpose of securing rest for the pyloric end of the stomach, and drainage for its cavity; also that gastro-enterostomy was performed oftener by means of the McGraw ligature than by any other means. This method has been more satisfactory in my hands than any other up to the present time. I still follow the original direction of the author of the method, which I published in the *Journal of the American Medical Association*, June 6th, 1903. It seems likely that

all the methods now in use will be displaced by some new method which will be more nearly ideal than any now in use.

So far nothing has been said concerning the treatment of any of the sequelæ, or the complications of gastric ulcer, because it is to be hoped that these will be eliminated to a great extent in the future, by the cure of the ulcer itself.

Complications.—The most common complications are perforation and hemorrhage.

Sequelæ.—The sequelæ are: (1) Chronic ulcer, (2) stricture of the pylorus, (3) gastric dilatation, (4) hour-glass stomach, (5) peritoneal adhesions, (6) inanition, (7) anemia, (8) neurasthenia resulting from the constant suffering, the malnutrition and the anemia, (9) carcinoma, and (10) jejunal ulcer following gastro-enterostomy.

Perforation.—The diagnosis of perforation is relatively simple. There is a history corresponding to that given for gastric ulcer above. During some exertion, the patient suddenly experiences severe pain in the region of the stomach. This is frequently attributed to the eating of a large meal, and may consequently be mistaken for acute gastritis. The pain becomes diffuse very suddenly. The patient is nauseated, and sometimes vomits blood or bile. The abdominal muscles become rigid, the patient is in a severely shocked condition.

The greatest point of tenderness is in the region in which tenderness existed previously. In many cases the liver dulness is obliterated to a greater or less extent, but it is not safe to place too much weight upon this symptom, because it frequently is present only after the perforation has existed for several hours, and if operation is postponed until this diagnosis can be confirmed by this symptom, the extent of the infection is usually so great that the operation cannot save the patient.

With two exceptions, all of my cases in this class were in this hopeless condition when they were admitted. The important point in connection with these cases is an early diagnosis and an immediate operation. The latter should consist in a free abdominal incision, careful sponging out of stomach contents that have escaped into the peritoneal cavity, closure of the wound in the stomach with Lembert sutures, preferable of silk or Pagenstecher thread. Drainage should always be used.

In cases in which the diagnosis is not made for 24 hours or longer after the perforation has taken place, it is difficult to state which course is the worst to pursue. In my own experience, all of the cases which came under my care in this advanced stage, which were operated, died within a few days, while a few which were not operated, recovered, the opening in the stomach being closed by a plug of omentum. In some of these cases a subphrenic abscess developed, later requiring an operation.

I am confident, however, that these cases were all somewhat less serious from the beginning than those which were operated and died; and it would consequently not be proper to attribute the recovery of the former to non-operative treatment, and the death of the latter to the operation.

It seems proper to advise an immediate operation in all cases of perforated gastric ulcer, in which an early diagnosis is made, and to use one's judgment in each individual case of perforation, in which the diagnosis is not made early.

Gastric Hemorrhage.—A few years ago there was quite a marked tendency toward the immediate operation for gastric hemorrhage. Mayo Robson's experience in this direction was so encouraging, that quite a number of surgeons favored operative treatment for this condition. It seems, however, that this is quite unnecessary, because in almost every case the hemorrhage will cease, and if the patient is carefully treated, her general condition can be greatly improved, so that the risk of the operation itself will be much less than when performed during a hemorrhage.

The treatment should consist in exclusive rectal feeding. It may be well to administer from two to four ounces of castor oil early in the treatment, and then to place nothing whatever in the stomach, until there has been no blood in the evacuations for several days. Feeding by mouth should be begun with great caution, and as soon as the patient's general condition is good, the operation should be performed.

Sequelæ.—In the treatment of the first three in the above list, (1) chronic ulcer, (2) stricture of pylorus, and (3) gastric dilatation, the method must be the same. It must consist of drainage of the stomach cavity by gastro-enterostomy, or in rare cases by Finney's pyloroplasty. The one point of greatest importance which must not be overlooked, is the choice of location for the opening in the stomach at its very lowest point.

Rodman's suggestion, advising the excision of the ulcer-bearing area in these cases, is undoubtedly worthy of consideration. In my own experience the results have been more satisfactory in cases in which I have excised the pylorus in connection with making a gastro-enterostomy, but as this adds another element of danger to the operation, it may be well to continue our observations, before making this a routine treatment in these cases.

In cases in which a pylorotomy is not made at the same time, the gastro-enterostomy opening is likely to become partly or completely obstructed by contraction, and this may be followed by a recurrence of the ulcer. In cases in which a pylorotomy has been made, this has never occurred in my experience.

At the present time the choice of operation must lie between the methods introduced by McGraw, that employed by Mikulicz, Moynihan's method, or the method developed by Mayo-Murphy's oblong button; or Connel's

suture method can be employed in connection with the methods of Mikulicz or Mayo, but it seems likely that the button will continue to lose more and more of its old advocates while it is not likely to gain many new ones. This is true, especially, because with it the size of the opening is virtually limited, and there is a distinct objection in the minds of most surgeons against a non-absorbable foreign body.

The one great point in favor of the button is its ability to punch out an opening, and to leave the union between the stomach and the intestine with the slightest possible amount of connective tissue.

In order to be any practical value this paper must point out some of the dangers to be avoided in surgery of the stomach.

Unnecessary Traumatism should be Avoided.—There is great danger in unnecessary manipulation, because this increases the shock and the tendency to infection.

In all of these cases much can be done to prevent this by making an ample abdominal incision. Much time is frequently occupied in finding the jejunum, resulting in useless handling of viscera. By simply lifting out the transverse colon, and following its mesentery to a point a little to the left of the median line, one can always find the beginning of the jejunum in a few moments.

In gastrectomy and pylorotomy it is possible to reduce the manipulation to a minimum by simply grasping the four main arteries, and also the greater and lesser omenta between these four points, and then excising the intervening portion, which has been grasped by long-jawed forceps, in order to prevent leakage.

There is danger of necrosis of the stomach, if the gastric artery is injured, and of the transverse colon, if the middle colic artery is grasped in clamping the greater omentum.

In making a posterior gastro-enterostomy, there is danger of contraction of the opening in the mesocolon, unless the edges of this are sutured to the stomach.

There is always danger of angulation of the jejunum at its point of attachment to the stomach.

In all stomach operations it is well to have the patient placed in the sitting or semi-sitting posture, within a few hours after the operation, in order to prevent hypostatic pneumonia, and to facilitate drainage of the stomach by gravitation.

The greatest danger after operation comes from acute gastric dilatation, but this can be remedied readily by introducing the stomach tube. If gastric lavage is employed, it is, however, important not to introduce a sufficient amount of solution to do harm by pressure. Half a pint at a time is quite enough water to introduce. It is a rule with us to make use

of gastric lavage, whenever any patient is distressed after an operation upon the stomach.

In three cases in which gastro-enterostomy had been performed for the relief of pyloric obstruction in my series of cases the progress was perfectly normal for 3, 5 and 8 days, when the patient suddenly began to suffer from dyspnea. This continued for 6 to 12 hours, when the patient died. In the first two, an autopsy was not permitted. In the third it demonstrated the fact that the patient had died as the result of acute gastric dilatation.

We had previously had a number of similar experiences less severe in character, in which the dyspnea had subsided at once upon the use of gastric lavage, but it had not occurred to us that the distress was really due to acute dilatation.

One would think it almost impossible for this condition to escape recognition, but the presence of the dressing over the abdomen, and the fact that the distress is referred to the chest, is almost certain to lead one astray, unless one's attention has been directed, especially to the possibility of the occurrence of this condition. We have since observed this acute gastric dilatation to a greater or less degree in a number of cases, and have always been able to obtain prompt relief by the use of the stomach tube. Aside from the gas one always finds decomposing mucus and usually some old blood.

It is well to bear this possible condition constantly in mind in the after treatment of these cases.

Feeding.—These patients should be given one ounce of one of the various predigested foods in three ounces of normal salt solution as a nutritive enema every four hours.

After the third day some of these predigested foods may be diluted in water and given by mouth, but the rectal feeding should be continued.

Later, broths and thin gruels may be given, but should not be given until quite late, as they are rather more likely to decompose than these pre-digested foods.

The patients may be permitted to chew steak, and to swallow the juice within a week after the operation.

THE AMERICAN DISEASE: AN INTERPRETATION.*

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MEDICAL nomenclature, certainly as regards names for many diseases, stands to-day the most neglected, the most incongruous, the least rational and the least progressive of all the minor divisions of the subject. Many of those most familiar justify a

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continued existence solely through the fallacious law of traditional custom. In some instances, both name and disease being inelastic—typhoid fever or epilepsy, for example—no special harm is done. In others, as hysteria and chorea, we continue to insult intelligence apparently without either consciousness of shame or hope or desire for reform. There is something of promise in the tuberculosis of to-day rather than the consumption of our fathers, but much remains to be done, the work having scarcely begun. The field of neurology, perhaps, more than any other needs the scythe and pruning hook. The latter instrument could, in my judgment, be used with particularly beneficial effect if employed vigorously and with discriminating judgment in neurological nosology. Its first work, if in my hand, would be to clip and trim and shape into at least some semblance of definite form and substance that phantom, once a tree, now a forest and rapidly becoming a wilderness, so rank and riotous is its growth, neurasthenia. No shorter road to nervous prostration exists than along the route of present interpretation and mental comprehension of the term as generally understood or misunderstood. I confess to an antipathy—I think rational though amounting almost to an obsession—for the word. Originally intended to possess a definite significance, its field of application has been so elaborated and broadened and abused that to-day it means almost anything and with equal truth almost nothing. The inspiration which gave it birth marked the genius, but the child had grown a monster, fattening upon the flesh of hundreds of brothers and sisters, and even its cousins. It is still from custom classed among the neuroses or psycho-neuroses and thus the special property of the neurologist, but like its twin sister—the only sister left, by the way—hysteria, it has wandered afar with an omniverous appetite and is known to-day and claimed in some one of its hydra-headed forms in every field of medicine. To the stomach specialists belong the gastric and lithemic types, to the surgeon the post-operative and some of the traumatic cases. The sexual neurasthenic is the property of the genito-urinary specialists, the reflex cases are almost equally distributed to those who know the eye, the ear, the nose and throat, while the neurologists divide the remainder with the gynecologists, or play battledore or shuttlecock with all. The general practitioner alone is counted an invader in this field, and he, wise man that he is, with appreciative philosophy rarely feels himself aggrieved.

My criticism is not of the term etymologically. On the contrary properly restricted in interpretation, it is an excellent example of word-making. It should stand, however, for either fish, flesh or fowl—for a definite entity or syndrome—if retained in our nosology. If discarded in this field, by all means keep it, but restrict it to the broad descriptive sig-

nificance of a generic term alone. I am not yet willing to accept the dictum embodied in the recent paper of an eminent American writer who, with a stroke of the pen, announces the passing of neurasthenia, for which he would substitute a group of pure psychoses, if for no other reason than that he leaves us none the better off for such a begging of the question; and yet one is almost tempted to let it pass away into final oblivion and without a protest on reading a serious thesis by another recent writer upon neurasthenia in babes. If it is to continue a neurological and general medical waste-basket into which we are to dump all forms and degrees of illness associated with irritable nervous weakness to which we cannot attach a standard label, then it cannot be lost too quickly. It means to-day to the student mind mystery, confusion, chaos and correlated aversion, curiously mixed with a contradictory fascination; to the patient it has become a term full of suspicion; to the medical teacher it is a term of reproach. No observation or experience during my fifteen years of post-graduate teaching has been more emphasized than this attitude or mind of the student body. Year after year and many times a year, the cry has been the same from all my classes: "What is neurasthenia?" I think you will agree with me that something should be done. The solution of the problem to me seems relatively simple. Let us stop running after strange gods and the making of false idols and return to the worship of our fathers and to one faith. There is a nervous affection—the very same which originally inspired Dr. Beard to coin the word, with a broadly constant symptom picture, a more constant etiology, a conjectural pathology, a fairly certain prognosis and a definite plan, in principles at least, of treatment, the chief and essential symptomatic manifestation of which is an irritable, quick exhaustion of nervous function in many or all directions. It has become almost lost, it has suffered degradation, it has fallen from the genius to the species in the literature of the subject, not so much through intrinsic conditions, but because of the confusion and chaos of interpretation. The dignity and importance of this subtype, its rapid and progressive increase, the charm and fascination of its study and of its remedial and curative treatment are such as justify and, indeed, demand that it be taken from this chaotic mass and be given a distant identity. Let *this* be neurasthenia. We shall simply give back to Cæsar what was his, lost property to the original owner. It is but the restoration of the birthright. How the thief will cover his nakedness is his problem, not ours.

I have but borrowed for a purpose my title, and having explained my motive, I discard it. And yet it is not altogether bad. That it has the ring of cheap sensationalism is a just criticism, though nothing was further from my mind, a disavowal which I hope has been anticipated and is accepted. In much that the condition that I have in mind represents,

in much that is peculiar to this affection—to neurasthenia—the term, the American disease, is both accurate and appropriate. As I conceive it, it is an American disease indigenous to this soil, and essentially a product causative conditions peculiar to this country. That it now exists elsewhere, and probably always did in sporadic form I do not doubt, but this is its home, this its soil, this the atmosphere in which it luxuriates. What is this disease? What are its symptoms? How differentiate it? What is its etiology and prognosis, and how is it to be treated? My limit of time will permit me to create the scheme of the picture only, but if the viewpoint be the proper one and the perspective liberal in breadth any one of my audience will, I am sure, be able to do the filling in. I would count my work well done and a good end accomplished if I did no more than infect you with the enthusiastic interest with which the subject inspires me. In the effect to do so I shall create part of the perspective referred to. First as to your material: Neurasthenia never occurs in fools. The idea constitutes a paradox. Neurasthenia may make a fool, but you cannot make a fool a neurasthenic. It is a disease of bright intellects, its victims are leaders and masters of men, each one a captain of industry. Each case is unique as a study if you are to study helpfully. There are no arbitrary limits to the horizon of studious effort. The political history of the world has been made largely by paranoiacs. Mahomet, Peter the Hermit and Oliver Cromwell are examples in point, to go back no further. In each there was an imperative and an impelling monomania. The world of literature, of art and of science, of fruitful endeavor in all higher fields, is indebted in an analogous degree to the neurasthenic, analogously endowed with an imperative and an impelling energy. Dr. Gould's list includes such names as Carlyle, Wagner, Huxley, Spencer and many others. The confidence, the faith of patients of this type, is to be classed as an inspiring stimulus in itself and is well worth the struggle to grasp understandingly this subject. That yours is the helping hand depended upon by such men—such giants—whom you may lead as little children; the knowledge that you, and sometimes you alone, may bring back into the world's arena of action and into the old supremacy, such factors in the world's work, represents to my mind an objective, a purpose, a sphere of usefulness second to none of the many laudable ambitions along the highest planes of medicine.

In painting the clinical picture it would mar my scheme to paint an individual likeness. I shall give you first the basis for a composite photograph, made up of the case histories of fifty selected patients from private practice. Forty-two of these were American born, the remainder, 8, with two exceptions, had been residents more than fifteen years; 22 were from New York City, 4 from Connecticut, 3 from

Massachusetts, 5 from Pennsylvania, 2 from New Jersey, 5 from as many different Southern States, 1 from Canada, and the remaining 8 from as many different sections. Forty-three were from cities of more than 100,000 inhabitants, although only 21 were city born. The average was 37, the oldest 62, the youngest 26. Without a single exception all were brain workers. Sixteen of these fifty had been makers of history in different spheres, some large, some small; mercantile, literary, religious, scientific, political or economic. Two of the number were among the hundred captains of industry assembled in a list made to commemorate a national function celebrated a few years ago. By occupation 13 were financiers, in multiple mercantile lines, really better described as promoters; 6 were lawyers, 3 clergymen, 2 merchants, 5 physicians, 5 brokers, 4 school teachers. Of the remaining twelve, 2 were professional politicians, 2 corporation officials, and 4 managers of large industrial plants. Four of the fifty were men of independent, self-acquired means, who described themselves as having no occupation at the time of record. They have been included in the groups mentioned according to previous occupation. Four of this series were women, 1 a journalist, 1 an actress, and 2 of them teachers. Fourteen of the fifty were unmarried, the age average of this series of fourteen being relatively high, forty-four. The four females were all childless, though two of them were married.

Instead of an analytical elaboration of individual symptoms, let me give you a standard clinical history selected from the series of fifty as a type portrait.

M., aged 33, male, born of healthy, good stock, American parentage, the only handicap being parental poverty. Driven by necessity and by that subtle factor, temperament, to early effort in extraordinary degree, he acquired the strenuous, ambitious, high tension, keenly sensitive habit. He could not afford a liberal or broadened education because his own dollars paid for it. At 19 he was in business as apprentice in a large establishment manufacturing mechanical engineering appliances. At 26, with a capital of \$500, he organized a company, had it incorporated, was president, secretary, treasurer, superintendent and salesman, and chief stockholder, entering into competition with established and lavishly capitalized rival corporations. Awake at 7, he hurried through breakfast a few minutes later, mixing an omelet with an order or a countermand, assimilable sometimes with the former, always incompatible with the latter, taking in with his coffee the London market or the Paris bourse, dividing the steam supply between brain and stomach when it should have been all turned on at the point of physiological demand. A hurried walk to the train, possibly a delusional constitutional in this very walk, the steam being still turned on

to the top floor. In the office a pile of mail, interviews with clerks, orders, directions, instructions, detail work in every department. Just here *en passant* is laid the immediate foundation of the breakdown. It is the man of detail, the man great in everything except the qualities which make the general, who becomes the neurasthenic. It is the crime of attending to minutiae which makes the nervous derelict. The general is never a neurasthenic. It is the one flaw in the statute of true greatness. That quality, the highest, which helps us to select our lieutenants, is always lacking. The neurasthenic is the arche type of the poohbah. He is not only general, but also colonel, major, captain and private. The penalty is inevitable. No man can do the work of four along higher lines without paying for it.

After four hours in the office this man goes to lunch, tired, nervous and with preoccupied mind. He takes his secretary or manager, and again the attempt is made to mix a steak or an omelet with a business problem. The steam is still turned on at the top, or patient eats fast and drinks a lot of water or other fluid, prematurely flushing the contents of the stomach into the intestine. Already by nervous inhibition he has interfered with biliary and other secretions. The intestine, the duodenum, cannot take care of the albumenoids—the proteids—properly. It cannot take care of its own. The alkaline reaction of duodenal secretion has been upset by the flushed overflow of acid gastric juice, the secretion of bile has been inhibited by the state of mental tension and the diversion of energising agencies from digestive viscera to brain. Fermentative decomposition with resulting ptomaine and toxine formation follows, deficient nutritional assimilation plus chemical irritation are added to cell fatigue along a routine line without rotation. Notices of protest begin to come into first subconscious recognition, but are disregarded. They may come from any one or many sources. Headache of the cincture or helmet type, vertigo, a sense of irritable weakness, mental and physical, follows; vague mysterious messages in a strange language, never heard before, are received but not understood. This patient has always been well and has had no training along the lines of familiarity with symptoms. These messages at first ignored, sometimes hushed with a cocktail or a highball, or many of both, becomes more and more continuous and imperative. The habit of almost mechanical activity of mind projects itself into the hours of sleep. Insomnia develops, at first as dreamful, anxious sleep, then with fitful, broken sleep, and later with an allowance cut by more than half from the normal. He awakes tired, irritable. The pneumogastric is one of the first and often the most emphatic of the aggrieved protestants. Palpitations, overaction, an irregularity partly toxic, lay the foundation for what later has become an obsession of fear of sudden

death—precordlangst—heart anguish. He fears to be alone, to walk alone, to sleep alone. To this other fears have been added. A perfectly legitimate dizziness has laid the foundation for an almost hallucinatory persistence of this impression. Rapid motion, as in the cars or a carriage, high places, sudden changes in the visual perspective, originate as many phobiæ. Every nerve gets on edge and this hyperesthesia of auditory, or visual, or olfactory, or gustatory, or pneumogastric nerve, varying, as it necessarily does, in degree, gives explanation for the proteid system picture. It is the mystery of it all which leads to introspection in attempts at explanation, and finally to an exquisite exaltation of subject consciousness, a veritable delirium of anguish.

Neurasthenia is essentially a recoverable affection. In a majority the recovery is complete and final. In a few, usually neglected or mismanaged cases, the recovery is imperfect, relapses are common and the neurasthenic habit becomes almost a part of the individual. Even in these cases a steadily progressive tendency to recovery and to a normal poise as the final fixed habit may be established by persistent effort based upon an intelligent understanding of the general principles to treatment plus an appropriate application of such principles to the personal equation of the particular patient. Neurasthenia carries with it no penalty to succeeding generations. This statement is contrary to a *priori* reasoning, and also contrary to routine teaching and unthinking or ignorant belief. It is a statement based, however, upon careful observations in an extended experience, and I believe it to be absolutely true. The victim pays the whole penalty; the disease is free from the law of entail. The high average standard of good health and nervous poise in the children of neurasthenic fathers has been a frequent personal observation.

I do not believe that any individual case of neurasthenia ever originated in a single cause. The very essence of the affection makes such an hypothesis a paradox. Equally true is it that no single agency is sufficient to explain the prolonged maintenance of this condition. Any one of many causes may appear to dominate in a given case and for a given time, but the carefully studied etiology will prove a complex one in every instance. The list of stereotyped and empirically accepted causes is a long one and undergoes a progressive expansion from year to year. Overwork, worry, prolonged mental tension and anxiety, malnutrition from deprivation of food, sleep and rest, toxemia of autogenous and heterogenous sources, shock, trauma, reflex irritation, and as many more are on the list. Most of these are contributory factors only, and some are effects which are essentially secondary, being part of a vicious cycle, vicious in fact and even more so in interpretation. The insufficiency alone of any of these factors is tacitly admitted in the

usual statement that an hereditary predisposition is fundamentally necessary, a proposition not sustained in my own experience, though carefully investigated always. Neurasthenia is, I believe, essentially an acquired state and heredity, except of temperament, and a high grade cortex is an almost negligible equation. My chief criticism of the ordinary etiology as outlined is the narrow viewpoint with resulting technical limitation in treatment. What is the cause of these causes? *The factor in neurasthenia in the American disease—the factor common to all cases—is, broadly, that of atmosphere—the atmosphere peculiar to this country, the atmosphere of limitless possibilities, not in one field, but in all; in commerce, in art, in literature, in every field of intellectual accomplishment. It is this ether of limitless possibilities which stimulates the individual to a degree of effort, of tension, of strain, of superstrenuous endeavor, impossible and unknown, except by the infectiousness of example elsewhere. There is no limit to the game, and anybody may sit in. America is the only country in which you can go in with one white chip and have a chance to quit the biggest winner. It is this atmosphere which is the incentive to overwork. It is the anxiety, the tension, the strain of the game, which brings worry, loss of sleep and all the rest; and even here the penalty comes indirectly. The intoxication of endeavor, the delirium of effort, is at the expense of all conservatism. The laws of nature—inexorable as fate—fate itself, in fact, are violated not daily, but every hour. The hygiene of life is set aside. All kinds of degrees of insult are offered to brain, stomach, heart and every other organ. Day after day the steam is kept turned on and at full pressure to the one floor, and, worse still, often to the one room. Is it any wonder that all the rest of the house grows cold, or that, the power being insufficient, the machinery of the lower floors works poorly and makes poor goods? Every function suffers sooner or later. One after another, and sometimes several together, they protest, then openly rebel and finally go on strike. Indigestion, toxin and ptomaine formation, torpor of sewage function and resultant defective elimination add the element of chemical irritation, or autotoxemia, or lithemia, to the situation. The tired brain cell gives way under this added handicap and goes out on sympathetic strike.*

The accident of dominating symptoms in a given case is but rarely of any value in determining the etiology. Gastric and lithemic and other types may be recognized and distinguished symptomatically with some minor advantage, but no more serious error of interpretation exists than to conceive of them as primary etiological types with a correlated therapeutics. Anti-lithemic drugging will not cure a lithemic neurasthenia nor will lavage make well your so-called gastric cases.

I have again and again noted a urine with specific gravity above 1,030 with 14, 16, 18 and even 20 grains of urea per ounce, with lime oxalate and urates in abundance, all these conditions giving way to the normal under direct treatment, the neurasthenia remaining essentially unchanged. I never knew a sexual neurasthenic, so called, to be cured by any plan of direct genito-urinary treatment, and this statement applies with equal truth and force to all efforts (and I have seen many) to cure the reflex cases by removal of a supposed cause in any peripheral irritant.

I know of no condition in medicine which demands more exactly of the physician all the diagnostic resources of the profession, and yet mistakes in diagnosis should be rare. The symptomatic semblance of neurasthenia—the pseudo forms—which may sometimes present much of the picture, but will always show a radical omission or addition somewhere, should always be in mind and should be excluded carefully seriatim. More than one patient referred to me as a neurasthenic has been found to be the real victim of tuberculosis, of malaria, of Bright's disease, of gastric ulcer or some other similar affection. Anomalous forms of Basedow's disease in women and various toxic states among men have represented especially common mistakes in diagnosis. Paretic dementia in its incipient stages and some forms of melancholia, particularly the affective types, demand special mention. A guarantee of escape from the opprobrium of error as to the pseudo types is possible only through an exhaustive recourse to all measures and method of accurate information. Elaborate urinalysis, blood examinations and often examinations of the sputum is a routine procedure with me. In any case in which the dominant symptoms are referable to a particular function or organ persistently, I am proportionately suspicious of a local disease at least complicating the general state. It should not be forgotten that a neurasthenic may have a co-existent Bright's. In Basedow's disease which, as we know, may utterly lack the spectacular symptoms, the absence of goitre and of exophthalmos may easily lead us to interpret the nervous irritability, the quick exhaustion, the fears, the digestive and other functional disturbances, the loss of sleep and the widespread vasomotor symptoms as due to a neurasthenia, but the habitual quick pulse, the shallow respiratory action, the diarrhea and the *tout ensemble* of constancy in the picture will always give rise to doubts which will be converted into negative certainty when the etiology is considered. From paretic dementia we can distinguish neurasthenia by the presence in the former and the absence in the latter of organic signs. No matter what the degree of incipency, if the disease has advanced to the point of inducing symptoms, we shall find in paresis somewhere some of the physical signs. Special care should be observed in the melancholic (by the way, the majority type) forms of paresis. In melancholia we have, no

matter what the subtype, a constant syndrome; a characteristic facies, a post-cervical ache, a shortened sleep, an irrational melancholy and a tendency to suicide. In neurasthenia this facies is absent and the tendency to suicide is rare. Melancholiacs get to sleep as a rule with but little difficulty, but wake too soon, at 2, or 3, or 4, and sleep no more. In neurasthenia they sleep lightly, dream much and wake often. The post-cervical ache may belong to both, but in neurasthenia it is often a cincture or helmet headache, quickly dissipated by mental diversion. The neurasthenic can laugh, the melancholiac cannot. For a melancholiac to laugh is to refute the diagnosis. From myasthenia gravis it is to be distinguished chiefly by the absence of dominant bulbar symptoms.

What is the pathology of neurasthenia? The answer is almost anyone's guess, and yet to know the lines of experimental research and investigation already established is a long step in the direction of what will finally prove the correct guess. The work of Hodge, familiar to you all, was a far call in the right direction, and while it has given us no final solution, it probably paves the way to the yet to be demonstrated pathological explanation of these cases. The effects of fatigue, of worry, of irritation, upon the brain cell structure was proven to be actual and demonstrably so, by his work. Barrows has added observations which demonstrate with equal positiveness, the structural and sometimes actually organic changes and results which follow to the cell from malnutrition. All neurasthenics, it should be remembered, are examples of malnutrition from faulty assimilation and metabolism, usually secondary. The work along chemical lines with a final explanation in states of auto-intoxication promises much but that which appeals most strongly, even though as yet it offers least in a tangible, material way, is a combination of the others with an imaginative elaboration of the ion theory. The analogy of the highest governing nervous system with a telephone service in a large city has occurred to many, appeals to most of us and is familiar to you all. We have all been able to grasp mentally some conception of the power plant, the conducting wires, the receiving and transmitting station of the subscriber and a central, but the plan of a central switchboard is where we stop. The hello girl of the central station will not do. She is too unreliable; she goes to sleep on post; she talks distracting gossip; she has no sense of duty at times. Her sole stimulus to duty well done is often the approval of the inspector only and the \$10 per week. Neurasthenics don't gossip, they don't go to sleep—more's the pity—and yet the switch gets out of gear and you cannot get a connection, or if you do there is a buzz and you cannot understand which stands for the weakness; to which we might add in carrying out the analogy, the usual profanity, to represent the ir-

ritability. Mendelssohn, Frankhauser and others, in attempts to give a tagible, graspable explanation of electrical action upon nervous function, have advanced and elaborated what might be called the theory of wandering ions. You will recall that, when first announced, the neuron theory, in addition to facts proven, claimed, but did *not* prove a distinct individuality for each neuron, with no anastomosis anatomically with other neurons. This undemonstrated claim was unaccepted for the reason that it left less explained than before the observed and familiar facts of concert of action and synergistic relationship of nervous function which seemed to demand some anatomical connection. Imagine bodies endowed with auto-genous mobile life, which stretch an arm from 1 to 5, or A to G, wandering about with a restless usefulness, connecting two separate souls who want to get in touch in the same way but with infinitely more of reliability as the central hello girl connects you up with the number you send in from the transmitting phone. Imagine these little bodies goaded day after day to extraordinary effort, allowed no rest, no sleep, whipped by alcohol or tobacco, or coffee, suffering from deprivation and irritation in every way, rations served foul, working for a thoughtless, selfish, utterly inconsiderate master. Do you wonder that they get discouraged, tired, exhausted and confused, taking messages wrong, turning in a fire alarm here, calling in the police there, doing many things which they should do not and leaving undone those things which they should do? Very pretty, you will say, but fanciful. I admit it, but I deny any more of fact in any other theory.

The first step—the essential foundation of any plan of successful treatment in neurasthenia is the setablishment of a proper relation between physician and patient. The status of the physician should be firmly established before the question of treatment is considered at all. He will have laid the foundation of any plan of successful treatment well in a direct ratio with the thoroughness, the exhaustiveness of his diagnostic examination of the patient. Nothing should be taken for granted—no second hand information should be accepted. At the risk of being tedious, examine for yourself. Five minutes or less is often more than sufficient time for a final diagnosis in paresis or tabes—two hours is often time well spent in the first examination of a neurasthenic, and this is true even in the instance in which as many minutes, only, have been necessary to convince you of the nature of the case. Remember—there are two parties to the transaction. Your own enlightenment is not the only requisite. The neurasthenic always takes himself, and at least, some of his symptoms seriously. To tell him abruptly that this or that means nothing is not convincing to him, however true to you. No obvious foundation has been laid for so positive a statement in so short and superficial an examination. To you many of the symptoms are

distorted by exaggeration, to him they are real. Do not forget the axiomatic fact that neurasthenia does not develop in a fool, and as corollary to this fact make your appeal to the intelligence of your patient. Explain things; give the patient something tangible to grasp, some explanation that appeals to reason. He will leave the ether of imagination and come down to the terra firma of fact gladly. The effect at first may be upon the subconscious ego only, but the leaven of action will later rise into controlling consciousness. The physician, by the way, should never think, or believe, or guess; he should know. Therefore, he should lay at least a plausible foundation for such knowledge in a patient examination at the first interview. It is just as important that a reverse attitude should be the rule thereafter. Discuss with your patient in subsequent interviews every topic conceivable except his ills. At stated intervals go over the case objectively, taking an account of stock. Where favorable progress is noted, not only mention it—prove it; if still in *statu quo*, explain the delay in results. Silence is rarely golden in such situations. Equally important with this factor or proper relationship between doctor and subject is the control of the patient's environment. Just which is proper varies with different cases, but once settled, it should rarely vary with the case. Compromises and concessions are always dangerous. The patient's hand should never touch the tiller, once you have taken charge of the ship. First place him so as to minimize the influence of all adverse factors, domestic, financial and otherwise. Break up, as far as possible, all subtle or obvious factors which contribute to a morbid introspection by conscious or subconscious association. Encourage objective consciousness by a change in the physical and mental atmosphere. Sometimes this must be done radically, and the patient cut out from the family or from his business. Never leave him idle. Put him with a tactful, resourceful, sensible, attendant—train your own nurse by the way—train him over again, if a hospital graduate. Don't call him a nurse in any event—neurasthenics resent trained nurse. Give all your instructions to this nurse-companion—never to the patient, who should have nothing whatever to do with the case. Arrange all details of diet, of exercise, medicines, baths, diversion, etc., with the nurse. Give your patient a chance to escape from a knowledge every hour of the day that he is a patient. Keep him busy, fill in every minute of the day. A salt rub in the morning, the patient standing in eighteen or twenty inches of hot water, three minutes of practice in deep breathing exercises, after which comes breakfast. All meals should gradually be made as full and nutritious as possible. I observe idiosyncrasies, but no other law of special diet. After each meal from twenty to thirty minutes of recumbent rest is insisted upon—a habit observed by nearly every carnivorous animal, except man. Next

comes the daily visit to my office, with treatment by the galvanic current, one electrode back of the neck, the other over the forehead, both as large as possible, in order to get the utmost diffusion at the point of contact and thus a maximum of electricity with a minimum of discomfort from local action. A steady battery, a rheostat, a meter, and proper electrodes are absolutely essential. Part of the benefit is undoubtedly due to suggestion. This is a small part, however, by comparison with what I am firmly convinced by years of careful observation to be an intrinsically dynamic effect of sometimes striking benefit from electricity thus administered in these cases. I never exceed five miliamperes in amount, or half an hour for the seance. Usually I begin with one miliampere and a five-minute seance. On leaving my office, my patient goes direct, riding or walking, according to circumstances, to a gymnasium, the director of which, Dr. Watson L. Savage, is a medical graduate, whose life work has been given with enthusiasm to the co-operation, elaboration and perfection of a plan, which we both believe will, when perfected, prove a specific curative treatment for these cases, a proper environment and control being the only other essentials. By this plan of psycho-physical education control, we secure, by the indirect method, what is always difficult, and often impossible, by any direct plan—a lowering of tension, a mental relaxation, a return to rational inhibition, to order from chaos. These patients are taught the lesson of physical, muscular relaxation—how to lie down, how to go through the mattress to the bottom, how to turn loose physically. That the muscular system is energized and overkeyed into states of hypertension through sympathy in states of mento-nervous exaltation is familiar to us all in the tense mouth, the corrugated brow, the clenched hand, the restless walk. We simply start at the other end, and re-educate the higher through the lower. The quickest, the surest, the most rational way to key down a man mentally, is first to key him down motorially. I have waited for ten years of results to accumulate before announcing publicly, except in the lecture room, the value of this procedure. I give you no experimental theory. My unqualified endorsement is based not only upon a rational conception but many confirmations in experience. I count this part of the plan of treatment in neurasthenia one of the most positively helpful and essential of all the major details. The afternoon, following lunch and another half hour of rest, is spent out of doors—a horse-back ride, golf, tennis, a walk, a visit to some museum of public interest; a shifting from one to another of these diversions, largely based upon the personal equation of temperament in your patient, fills up the afternoons. In suitable of the evening must be filled, and occasionally the theatre or a club can be utilized, but never at the expense of sleep, if insomnia be a feature. A half-hour massage at bed time closes the day's work.

This one symptom, insomnia, must be controlled always. Make your patient sleep—count a dreamful night insomnia. Veronal, trional, sulfonal, in 5, 10 and 15-grain doses are effective and satisfactory. I often shift them. All should be given in some hot menstruum. No nervous patient should ever know his drugs—send the prescription yourself, and always mark it, “No copy. Do not repeat.” Fifteen years ago a few neurasthenics under my care came back to health and nervous poise in spite of the drugs which I employed in treating them. For five years past, using less than half the drugs, my percentage of recoveries has increased four-fold. Drugs play a varying part, sometimes no role at all, again, a vital one. Some patients demand them, others are indifferent, and still others need them neither mentally nor physically. Sleep must be secured and maintained, elimination and prompt sewage function regulated and complicating accidents combatted. For temporary use, until the regime outlined becomes effective in lessening it, the mental state of habit unrest and hyper-psychical-esthesia should be controlled, and the drug which most effectively accomplishes this purpose is opium in the form of the denarcotized aqueous extract in doses from one-tenth to quarter-grain three or four times daily. Free water drinking between meals is a desirable habit to encourage and a positive water, always symptomatically remedial in cases in which lithaemia is an aggravating factor, is the Royal Fachingen. I do not believe in the sanatorium treatment of these cases as I know sanatoria. If the ideal sanatorium existed, the sanatorium plan would be ideal. I add nothing to your personal knowledge, when I tell you that such an ideal does not exist. I can conceive of no more fitting nor important statement in conclusion than one of the condemnatory criticism of the misapplication of the Weir-Mitchell plan of rest and isolation in these cases. It is to be condemned first, as involving the conception of a *routine system or plan of treatment*; second, as encouraging introspection; and third, as violating in principle all intelligent interpretation of the whole subject. For women and feminine males it will do no harm; for men and masculine women it is an insult to intelligence.

THE FIFTH CASE OF SARCOMA TREATED WITH X-RAYS.

By JOHN McMASTER, B.A., M.D., Toronto.

CASE 5.—Miss H., age 21, consulted me in December, 1902, for a growth in her face and neck. She gave the following history: A small lump appeared on the side of the head in front of the ear. It was about the size of a hazel nut in September, 1900, when it was removed by a surgeon of this city. On examination it proved to be a small round sarcoma. In a few months it recurred in the same location when it was

again removed, but by a much wider and more extensive operation. In a few months it returned again and grew more rapidly than before. Discouraged with the result of operations she went to Markham and had it removed with plasters. This took three or four months to completely destroy the growth which was as large as a cocoanut, nodular and elongated. She suffered a great deal during the prolonged treatment; but, finally the mass was removed, the wound healed up, and, apparently, the growth eradicated. In a few weeks, however, it reappeared again more extensively than ever; and its growth was alarmingly rapid. When I first saw it, some three or four months after its removal by the plasters, it was about six and one half inches long, extending from one inch above the level of the eye, down the side of the head in front of the ear, and well below the angle of the jaw in the neck. It was in places quite purple in color, and large, tortuous veins covered its surface. It reached well over the malar bone below the eye almost to the nose. The vascularity of the growth was very striking. In places it was quite elastic to the touch and in others very hard and firm. It was immovable and firmly joined to the bones of the face. Early in January, 1903, x-ray treatments were begun and 15 treatments were given in five weeks using the most approved technic then known. After this as much of the growth as could be removed with safety was excised and the malar bone and those adjacent were curetted. The bone was quite soft and easily scraped away. Much more could easily have been removed. The ragged flaps of thin skin were laid over the wound and retained by compresses, rolls and some long sutures. The hæmorrhage was very profuse at the first, but was readily controlled by hot sponges and compresses. Three days after this operation she was again submitted to the x-ray treatments. These applications were made on alternate days. Under these treatments the wound healed very rapidly, being complete in a little less than three weeks. The deformity resulting, while quite marked, was not nearly as great as one would expect. Before the removal of the growth, her health was poor, and she had lost weight. Almost immediately after the wound healed, she began to improve and continued to do so till she became stronger, heavier and better than she had ever been. I continued the treatments till April. Then a course of treatments by Coley's toxins was carried out in conjunction with the x-rays. I felt that the disease might not be eradicated from the bones below the eye. Treatments were continued till the end of August, when she was sent home with instructions to report at once if she noticed anything wrong. By this time a very great improvement in her appearance had taken place and all evidence of any disease had disappeared. In March of 1904, she returned with some discomfort and aching in her face. There was nothing visible, but on close inspection under pressure there was evidence of trouble deeply situated in the malar region. Vigorous raying was begun and in about two weeks

a burn was produced which caused her some inconvenience. The disease was evident and I evacuated a small quantity of broken-down, pulp-like, bloody substance from the cheek. Began raying again, keeping wide of the infected area, giving long exposures at long distance with a moderately hard tube. By the middle of April it was evident that raying would have to be discontinued, as a superficial burn was developing. This took about five weeks to recover and, in its early stage, gave her considerable inconvenience. A mild galvanic current applied to the part, using the negative pole, brought about active healing. After recovery from the burn, the appearance showed that there was still disease deeply seated in the tissues and possibly in the bone. Believing that the parts would not be able to stand sufficient raying to destroy the disease without producing another burn, I resolved to make use of the electric current to drive a destructive agent into the affected tissues. Mercury was the drug used and I followed Dr. Massey's plan. A thin sliver of zinc was newly amalgamated with mercury and inserted into the diseased tissues by an opening made under cocaine-anæsthesia. A constant current of ten milliampères was employed for fifteen minutes at each seance, the positive pole being attached to this zinc, while the indifferent negative one was applied to the back, using as broad an electrode as possible. Very little pain was experienced as a drop of a saturated solution of cocaine was applied to the positive pole during the treatment. In the next cataphoric treatment I used Donovan's solution, applying a small wrapping of absorbent cotton to a platinum wire, about as thick as a small knitting needle. I inserted this into the opening under local anæsthesia, keeping it saturated with Donovan's solution. These treatments by cataphoresis were alternated, six of each being given, five or six days intervening between each treatment. As the tissues affected by the growth were most easily destroyed by the mercury and arsenic, it was found that the malar bone was involved and the structures beneath the zygomatic arch. During the progress of this treatment and while the growth was still present, her health suffered. But again it returned and she grew quite vigorous. The wound healed kindly, and without much disfigurement. Several x-ray treatments were given during August and September, partly to improve the motion of the jaw by removal of scar tissue, and to destroy outlying foci of disease if still present. Being an accomplished singer, it was a great delight to her to find that she could again use her talent, and open her mouth almost as widely as formerly. But greater sufferings were in store for her. During the latter part of September she had repeated and severe attacks of neuralgia and ear ache on the other side of the head. Deafness gradually came over the left ear and the pupil of the left eye dilated. A numbness of the left cheek and side of the head developed with almost constant pain in the region of the ear,

deeply situated. She suffered a great deal but no visible focus of disease could be located. It became evident by the first of November that a growth was slowly developing in the region of the petrous portion of the temporal bone, probably involving the meninges. The subsequent history in detail I cannot give, as she returned home and was under the care of the family physician till her death in April, 1905. It is singular that the metastasis should take place on the opposite side of the head to that on which the original growth existed. When it took place and what was the cause of it I am unable to answer. After going through so many operations without dissemination, I had high hopes that if the local disease in situ could be destroyed, a useful life would be spared. Apparently the growth was destroyed on the side on which it originated. The x-rays exerted a marked inhibitory effect on the sarcomatous cells and, in time, would doubtless have destroyed them, but for the unfortunate circumstance of a burn, developing. The depth of the returning disease, about one inch from the surface, shows that it exerts its greatest effects nearest the surface. Since this case I have used this method of cataphoresis to destroy small growths with success. That it destroys growths of lower resisting power than the normal tissues, is undisputed. It also sterilizes or kills bacilli.

I have used it on five cases of tubercular glands with complete sterilization of the glands and removal of the disease with almost no markings on the neck being left behind after the treatment.

X-RAY TREATMENT OF CANCER.

The microscopic changes in the tissue, says E. G. Williams, of Richmond, Va., *Journal A. M. A.*, May 6, should be our guide as to the therapeutic possibilities in the x-ray treatment of malignant growths. It is evident, he states, that the elements of the tissues are affected according to their vitality. Dead organic matter is unaffected, and the more active the growth the greater the effect. Next to this is the accessibility of the tissues to the rays. Hence the better results with superficial or skin cancers. That moderately deep tissue can be affected is shown by experience, and the way to reach them without producing necrosis of overlying tissues is to lengthen the distance of the tube and the time of exposure. For deep growths, radical surgical measures should be recommended, as the patient should be given the benefit of the probability rather than the possibility of good results. In such cases, however, operation might be rationally followed by x-ray treatment to destroy what may remain of the malignant growth. Inoperable cases should be treated by the x-ray because remarkable results have been obtained and the most distressing symptoms of pain relieved.

QUEBEC MEDICAL NEWS

Conducted by MALCOLM MacKAY, B.A., M.D., Windsor Mills

The 76th convocation of the Medical Faculty of McGill University, on June 9th, was one of the most interesting in the history of the school. The amalgamation with Bishop's College was completed by the conferring of the degrees, M.D., C.M., upon nine members of the faculty of that college, namely, Drs. F. R. England, Wm. Burnett, Geo. Fish, T. S. Hackett, Geo. Hall, W. H. Drummond, Herbert Tatley, J. M. Sark and S. S. Benny.

Dean Roddick presented the annual report and stated that the number of students in attendance during the past season was 381, or, including the post-graduates, 394. Of this number Quebec contributed 93; Ontario, 110; Nova Scotia, 37; New Brunswick, 44; Prince Edward Island, 21; United States, 31; West Indies, 11; Newfoundland, 6; British Columbia, 18; Manitoba and Northwest, 9; England, 1.

Since 1901-2, there has been a falling off in the number of students in the faculty, chiefly from Quebec and Ontario. This was partly due to raising the fees by one-half, and the greater cost of living in Montreal; but the diminution of the English population in Quebec, and the increased equipment in Ontario Colleges have also been factors.

The dental department organized more than a year ago, was now ready for work, four students being in attendance during the session just completed.

They took the primary subjects in the first and second years, their professional studies in that period being in every respect identical with those of medical students. During the third and fourth years they will be engaged in purely dental work, their studies, under faculty supervision, being directed by the officers of the dental department. The latter comprised three professors, two lecturers, and two demonstrators. At the conclusion of a four years' course, the students will be entitled to the degree of master of dental surgery, and, subsequently, on presentation of a thesis they may claim the title of doctor of dental surgery. Thus a most thorough course will be followed, and the degree will be one worth having.

The amalgamation, or absorption of the Medical Faculty of Bishop's College was briefly referred to. The union of the two medical schools was thought to be desirable, as tending to increase the efficiency of medical education in Montreal, and also to bring about a more friendly feeling and greater intimacy between the practitioners interested in the two

schools. It was thought also for medico-political reasons that the consolidation of the English speaking portion of the profession in this Province would be desirable. All the negotiations were based upon the assumption that Bishop's College would surrender, for a term of fifteen years, the right to teach or confer degrees in medicine in the Province of Quebec. Provision was made for receiving, under certain conditions into the McGill Faculty, the students of Bishop's College *ad cundem statum*. As to the question of appointments of members of the staff of Bishop's College on the staff of McGill, the joint report read as follows: "Appointments should not be made as a necessary result of the amalgamation of the two schools; but the Faculty of Medicine of McGill University would, as opportunity offered, make or recommend appointments which would add to the general efficiency of the teaching strength of the school, particularly in the utilization of clinical fields now controlled by the Medical Faculty of Bishop's College. The members of the committee of Bishop's College recognize that any such arrangement would necessarily be a work of time."

After some years of doubt and uncertainty the Medical Faculty decided to sink its autonomy and come into fuller union with the university. This step, which was taken after grave deliberation, places the Medical Faculty in exactly the position as the other faculties; that is to say, the governors of the university will, in future, control all revenues and assume all the financial responsibility, hitherto borne by the faculty itself. By this arrangement it is felt that not only will a more healthy university spirit be engendered, but that a greater personal interest in the faculty will be displayed by the authorities of the university.

The faculty of medicine was again indebted to Lord Strathcona for \$50,000, which was to be used to wipe out liabilities incurred in connection with the recent extension of the buildings. Dr. Roddick hoped that others would follow Lord Strathcona's example, and support an institution which could never be kept running on the student's fees. The New Maternity Hospital was announced as nearing completion, and that it would compare favorably with similar institutions in any city when finished. The medical superintendent had been chosen and a full staff, as heretofore, would be in charge. An additional field for clinical work would be presented to the students at the opening of the next session, when the Alexandria Hospital for Contagious Diseases would be completed.

The Dean had a few words to say in regard to Dominion registration. In the first time in the history of this movement, the medical students had taken up the question and made their influence felt among the local members of Parliament in those provinces which had hitherto failed, or refused, to pass the legislation necessary to bring the Medical Act into

operation. Nova Scotia, New Brunswick, Prince Edward Island, Manitoba and the Northwest Territories adopted the measure in 1903, and stand solidly in its favor to-day, waiting only for Quebec, Ontario and British Columbia to fall into line. It was hoped that Dr. Pyne, Minister of Education in Ontario, would take the matter up at the next meeting of the Legislature. British Columbia would doubtless follow suit, and then Quebec would realize its impossible position and would also pass the measure. He hoped that the students everywhere in Canada would continue this agitation in this matter till all opposition had been removed.

Dr. Craik, late dean of the Faculty of Medicine, spoke upon the projected building of a students' residence, and he thought that the time was at hand when students could obtain first class board and lodging at cost price. The present system of boarding houses had many disadvantages, cost and lack of home comforts being the great drawbacks.

Seventy-three graduates received the degrees of M.D., C.M., the Holmes medallist—highest aggregate in all the subjects of the medical course—was Mr. H. C. Mersereau. Mr. F. I. Tees, B.A., carried off the final prize for aggregate in subjects of the fourth year. The following are the names of the graduates who took honors in aggregate of all subjects: 1, H. C. Mersereau; 2, F. I. Tees, B.A.; 3, H. C. Burgers; 4, C. F. Moffatt, B.A.; 5, H. A. Leslie; 6, A. R. Robertson; 7, J. H. MacDermot; 8, E. H. Henderson, B.A.

Third Year Prizeman, Mr. R. S. MacArthur; Sutherland Medal, Mr. D. R. Fraser; McGill Medical Society Prizes, W. L. Holman and R. I. Monahan.

Second Year Prizeman, Mr. R. M. Benoie; Senior Anatomy Prize, A. L. McLennan, B.A.

First Year Prizeman, Mr. R. H. McDonald; Junior Anatomy Prize, Mr. R. B. Dexter.

The following appointments were made to the Royal Victoria Hospital: Admitting officer, Dr. D. W. McKechnie; house physicians, Drs. Meakins, Burgess, Moffatt and Tull; house surgeons, Drs. McKenty, Hutchison, Lincoln, Leslie, and Henderson; house gynaecologist, Dr. Hardisty; house laryngologist, Dr. McKinnon; house ophthalmologist, Dr. Muckleston; anaesthetist, Dr. McLauchland; radiographer, Dr. Cram. Forty-three candidates applied for seven vacancies on the above staff.

The General Hospital staff has also been appointed and the following are the successful candidates: Dr. C. W. Anderson, resident pathologist; Dr. I. C. Fyshe, J. L. Robinson, L. L. Reford, reappointed; Dr. A. R. Robertson, F. I. Tees, H. C. Mersereau, I. R. B. Nellis, G. O. Hume, J. H. MacDermot, E. T. F. Richards, house physicians; Drs. C. F. Moffatt, I. H. Mason, locum tentus.

MEDICAL SOCIETIES AND GATHERINGS.

TWENTY-FIFTH MEETING OF THE ONTARIO MEDICAL ASSOCIATION, JUNE 6, 7, 8, 1905.

By HERBERT CARVETH, M.D., Toronto.

Dr. Machell, of Toronto, read a very interesting paper on "Modified Milk vs. Whey Mixture." He pointed out that the greatest difference in cow's milk was in the proteids—in human milk the proteids consist of caseinogen 6 per cent. ; lactalbumen, 1.4 per cent. ; while in cow's milk the proteids consist of caseinogen, 3.75 per cent., lactalbumen, .75 per cent. It is the caseinogen which causes the trouble. Now, if whey is used, the caseinogen is practically nothing, while the fats are reduced from 5 to 1 per cent., and the lactalbumen is .75 per cent., practically what it is in human milk. Now, if cream is added to the whey mixture, we have a very suitable substitute for human milk. He went on to show that if the child was able to digest the caseinogen it was suitable for the child, and he gave a table which regulated the percentage of caseinogen in the mixture.

Dr. H. A. Bruce gave some conclusions based on over 400 operations for appendicitis. He strongly advocated the early operation.

Dr. Bruce Smith read a very interesting paper on the Preludes of Insanity, illustrating chiefly that the prophylactic treatment of insanity was the course to follow. He believed that if the first symptoms, such as sleeplessness, indigestion, etc., etc., were looked thoroughly into there would be fewer cases in the asylums. In the discussion Dr. Mitchell thoroughly agreed with Dr. Smith. Dr. A. A. Macdonald thought it was a disgrace that people who are suddenly stricken with mania would have to either go to the gaol or directly to an asylum for the insane. Dr. Barrick thought that a special part of the asylum should be set apart for insane patients with tuberculosis. Dr. Ross thought the Government should compel the hospitals to provide accommodation for patients with acute mania, where they could be intelligently watched and see if their cases were curable or not. All of the speakers were of the opinion that the name asylum should be cast out of the language and hospital substituted.

Dr. William Burt, of Paris, delivered his presidential address, which was a very able contribution to the programme of the association.

In the afternoon Dr. A. J. Ochsner, of Chicago, read an excellent paper on the surgery of the stomach from the standpoint of the clinician, especially taking up gastric ulcer, giving the symptoms, differential diagnosis, complications, sequelæ and surgical treatment. In the discussion following this paper, Dr. Bingham said that he was glad to hear Dr. Ochsner mention that there was not any advantage of the posterior over the anterior operation of enterostomy. Dr. J. F. W. Ross, brought up the subject of the Murphy button vs. the McGraw ligature. Dr. Primrose wanted to know the results of simple sutures in these cases. Dr. N. A. Powell and Dr. McPhedran also took part in the discussion.

Dr. J. F. W. Ross gave a paper on operations for immediate repair of the genital lesions of childbirth. He was of the opinion that no matter how careful the physician might be, he would sometimes get lacerations. In lacerations of perineum and vagina he advocated immediate repair, *i.e.*, within 24 or 48 hours of the injury; but in lacerations of the uteri, he advocated waiting till the cervix contracted, showing just what the extent of the injury was. In the discussion, Dr. A. A. Macdonald thought that in most of these cases prevention was better than cure, and he said that in occipito-posterior cases if you change the position of the child to anterior position you will seldom have a laceration. Dr. Fenton mentioned the plan adopted at the Burnside Hospital which consisted of repair of these lacerations within a day or two of injury. He also mentioned that if he discovered that, six days after labor, involution was not going on, the pulse and temperature being normal, he suspected laceration of the cervix.

Dr. Hadley Williams, London, gave the results of two interesting cases of stone in the kidney. He advocated early operations and careful examination of the urine in suspected cases. The two most important symptoms were, he thought, the character of the pain and frequency in micturition. In the operation itself, the opening should be made in the pelvis of the kidney and not through the kidney substance, as the bleeding from the opening in the pelvis was practically nil.

Dr. J. Biggar, Tillsonburg, gave an interesting paper on the "Contrast between Urban and Rural Results in Broncho-pneumonia," illustrating his paper by giving the results of twenty cases of his own without a death. He advocated, using less drugs in these cases, greater attention to the digestive system, an initial dose of calomel, counter irritation to the chest, and the use of stimulants if required.

Dr. C. A. Hodgetts gave a paper on a plea for a Provincial Minister of health. He pointed out that since Confederation the Province had expended over \$25,000,000 on health institutions. This was more than one-fifth of the total expenditures of the Province. The abolition of the Board of Health would go a long way to paying the Minister's salary.

Dr. A. McPhedran read a paper on the "Evidences Resulting from the Functional Disturbances of Digestion." He mentioned that the stomach trouble might be primary or a symptom of tuberculosis, carcinoma, chronic Bright's disease, etc. The fault might be with the motor power, a sensory disturbance, or secretory disturbance. He then took up each in turn, giving causes, symptoms and treatment. He mentioned that the sensory or secretory function might be seriously at fault; but as long as the motor power was all right very few symptoms were shown.

Dr. S. M. Hay, Toronto, read a paper on "A Critical Review of Ventral Suspension of the Uterus, Favoring the Operation," and giving his experience in about twenty operations for the relief of retro-displacements of the uterus. He mentioned that the operation was only applicable in chosen cases. In the discussion, Dr. Webster stated that the good results in these operations came not from the ventral suspension, but from other interferences, such as fixing the cervix, etc., which is generally combined with ventral suspension. Dr. Ross said that anybody wanting the operation of ventral suspension done would have to go to some other surgeon, as he did not favor the operation at all. Dr. Arnold, London, also spoke against the operation. Dr. Clouse mentioned operations by Bessel, New York, and Johnson, Cincinnati, for relief of these retro-displacements.

Dr. Graham Chambers, Toronto, read a paper entitled remarks on the cutaneous affections observed in hysterical patients, the classification of the paper being as follows:—

1. Feigned eruptions.
2. Sensory Neurosis: Hyperæsthesia, dermatalgia, pruritus, paræsthesia, and anæsthesia.
3. Motor Neurosis: Anæmia, asphyxia (Raymand's), gangrene erythema, and urticaria.
4. Secretory Neurosis: Hyperhydrosis, anhydrosis, hæmathydrosis, and uridrosis.
5. Trophoneuroses: Alopecia, atrophy and dystrophy.

At the business session it was decided to hold only a business session of the association next June, on account of the British Medical Association likely meeting in Toronto next year. The nominating committee having recommended the following list of officers, a resolution was passed declaring them elected: President, Dr. George A. Bingham, Toronto; first vice-president, Dr. Ingersoll Olmsted, Hamilton; second vice-president, Dr. E. B. Echlin, London; third vice-president, Dr. A. Gillespie; fourth vice-president, Dr. Hadley Williams, London; general secretary, Dr. Charles P. Lusk, Toronto; assistant secretary, Dr. Samuel Johnston, Toronto; treasurer, Dr. Frederick Fenton, Toronto.

Dr. Price, Toronto, gave a paper on the Pharyngeal Tonsil, followed by a paper on "The Faucial and Lingual Tonsil," by D. J. Gibb Wishart.

Toronto. Dr. Trow took part in the discussion and he thought that some cases of adenoids and enlarged tonsils could be cured by local treatment.

Jas. Newell, Watford, reported two very interesting cases, one a case of "Liver Tongue," showing the difficulty of differential diagnosis of abdominal tumors in this condition. In the discussion Dr. Ochsner, Chicago, said that he had seen a goodly number of these cases, and that it of itself did not give any symptom; and if pain or other symptoms were present in these cases of prolongation of liver substance that either gall stones, gastric ulcer, or, rarely, appendicitis would be found to be present. Dr. Holmes reported two very interesting cases of "Liver Tongue" in his practice. Mr. Cameron also mentioned a few cases which he had operated on. The other case reported by Dr. Newell was a case of achylia gastrica. Dr. McPhedran objected to the use of this term, as only indicating a symptom often present in many diseases, such as pernicious anæmia, etc. Mr. Cameron thought the use of the term a good one.

Dr. T. K. Holmes, Chatham, gave a summary of 270 laparotomies done by himself, with remarks on the technique adopted. In these cases Dr. Holmes had only a mortality of 2 per cent. In the preparation of the patient he stated that the night before operation he had the part washed with soap and water. Then a saturated solution of permanganate of potash used, followed by oxalic acid, then cloths wrung out of 1-2,000 bichloride of mercury put on over night. Next morning the part was again washed with soap and water, alcohol and then ether.

K. C. McIlwraith, Toronto, gave a statement of his "Clinical Experience With Labors in Contracted Pelvis."

F. W. Marlow, Toronto, took up for his paper, "Simple Ulceration of the Stomach and Duodenum."

H. Howitt, Guelph, made some "Remarks on the Surgical Treatment of Chronic Nephritis with Notes of Cases." Besides simply decapsulating the kidney, he makes a blunt incision along the convex border of the kidney, which relieves the engorgement, and seems to aid greatly in the success of the operation.

Dr. W. B. Pritchard, New York, read a very able paper on neurasthenia, the title of his paper being "The American Disease; An Interpretation." In the discussion Dr. McPhedran thought that the term neurasthenia should be applied to the milder grades of the disease and not only to the advanced type that Dr. Pritchard wanted it limited to. Dr. Meyers, Dr. McCallum, London; Dr. Britton, Toronto; and Dr. Beemer, Toronto, also took part in the discussion. The trend of the discussion was that in this condition the nerve cell was badly nourished, over worked, exhausted, or poisoned, or all of these combined.

Dr. Ingersoll Olmsted, Hamilton, cited a very interesting case of "Resections of the Splenic Flexure of the Colon" for malignant disease, with exhibition of the patient and specimen. Dr. Olmsted used the simple suture in the anastomosis of the intestine. In the discussion Dr. Teskey thought the practice of physicians of giving cathartics in all cases where the intestines were not acting was too prevalent. He thought that the intestine was like any other part of the body. If there was inflammation present and nature tried to secure rest of the intestine to get healing, and that it was a great mistake to get up active peristalsis in these cases.

Dr. R. D. Rudolf, Toronto, took up the medical treatment of exophthalmic goitre and Dr. C. B. Shuttleworth discussed its surgical treatment. In the discussion following, Dr. Ochsner, Chicago, mentioned his plan of guarding against the danger of thyroidism, injury of the recurrent laryngeal nerve, and the anæsthetic. He found that thyroidism would not occur if the gland was handled gently, and not pulled around too much. In guarding against the injury of the recurrent laryngeal, he left a piece of gland in the immediate neighborhood of the nerve. In giving the anæsthetic for the operation the patient should be put fully under its effects at first, and then no more should be administered throughout the operation.

Dr. H. H. Oldright, St. Catharines, read a paper on cases of electrical burns and lesions from live wires. The important point in the paper was to show that the burns differed essentially from other kinds of burns, and that the healing took a great deal longer. The prognosis would therefore have to be guarded. In the treatment, a dry aseptic dressing was applied and later, moist dressing for suppuration. He showed that sudden death, in these cases, was due to the paresis of the cerebral centres or a tatanic condition of the heart muscle.

Dr. G. H. Burnham, Toronto, gave a paper on abnormal refraction and eye-strain.

Dr. Goldwin W. Howland, Toronto, dealt with compression paraplegias, following spinal caries and the results of surgical intervention for its relief. The operative cases did not appear to do as well as the other cases; but, as he said, the ones operated on were the worst cases. The symptoms produced in these cases consist of the ordinary symptoms of caries with paralysis.

Dr. C. J. O. C. Hastings, Toronto, discussed the duty of the profession and the state in regard to the mental, physical care of our improperly cared for children. He stated that in England every one in five children died before the age of one year; and that in New York, out of 75,000 children, 25,000 died before the age of one year, while in Ontario, out of 40,000 children, 6,000 died before the age of one year. He showed that this great mortality was due to want of food, improper food and

lack of care of the parents. He thought (1) that the Government should print a pamphlet, instructing the public in the care of children, these pamphlets to be distributed through the medical men. (2) That there should be inspectors to make a systematic inspection of our public schools for infectious diseases, etc. (3) That it was the duty of the state to give the improperly cared for child a good moral, physical and mental training till 15 years of age. He spoke strongly against the Government in expending so much money for bringing into the country the class of immigrants that were being brought in, instead of giving more money to train and bring up the uncared-for children of our country.

Sir James Grant, of Ottawa, who was present, spoke very favorably of the paper and said that in Japan there were 9,000 inspectors to look into the condition of schools, etc.; while in this Canada of ours there was not a single medical inspector of schools.

Dr. Thistle, Toronto, spoke on the treatment of intestinal lesions in typhoid fever. He favored the use of free purgation and the use of intestinal antiseptics. He said that since he had used this treatment (1893) he had not had a single case of perforation in his practice. Dr. McPhedran said that he did not agree at all with Dr. Thistle's treatment; and that some one would have to prove to him wherein this treatment was ahead of the ordinary treatment for typhoid fever before he could see his way clear to use it.

Dr. Parfitt took up the selection of cases for the Muskoka Free Hospital for Consumptives.

Dr. D. Campbell Meyers, Toronto, introduced the subject of wards in general hospitals for acute nervous and mental diseases. He mentioned the different places where this was being done and the success of the plan. Instead of having to send our patients, who are taken with acute mania, to the jail or directly to the asylum, we could send them to the hospital to watch and treat them to find out the extent of the mental trouble. A committee was appointed to look into this matter and report at a later date.

Dr. Paul L. Scott, Toronto, read a paper on the Clinical Estimation of Blood Pressure, showing its advantage in clinical diagnosis, especially in chronic nephritis, in the onset of uræmia or eclampsia, in the differential diagnosis of hæmorrhage or perforation in typhoid fever. In hæmorrhage there is a sudden fall of mercury, while in perforation we get a sudden rise of the indicator. In the administration of chloroform there is a gradual fall in the indicator from first to last; while, in the administration of ether, the mercury tends to rise. In the administration of anæsthetics the danger signal is indicated in this manner quite a few minutes before symptoms begin to make themselves manifest. It is of

great value in finding out the effects of stimulants. It has been found that the effects of the nitrites in lowering blood pressure are temporary, only of about 30 minutes duration. It has been found that alcohol is no longer a cardio-vascular stimulant, as it only gives a momentary stimulation, then remains stationary, or has a depressing effect. Strychnine has been found to be a valuable stimulant. It has been found that in collapse or shock, in which the centres are so affected as not to react to stimulation, the use of strychnine does harm instead of good. The initial dose of strychnine to have the best effect should be large, 1-15 to 1-10 grain. The subsequent doses are much smaller, 1-60 to 1-30.

Dr. Shaw Webster, Toronto, described his method of hysterectomy by bisecting the uterus and when the operation is indicated. He strongly advocated the vaginal route. He exhibited the instruments required for the operation. The advantages of this method are that it can be performed rapidly, that there is good drainage, and no after hernia.

A number of resolutions were carried, including a vote of \$100 to the Ontario Library Association, a vote of thanks to the officers and committees, and to the University authorities for the use of the medical building. One member was expelled from the association and his name ordered to be erased.

DR. CHARLES O'REILLY HONORED.

At least one hundred medical friends of Dr. O'Reilly gathered at the Albany Club on Saturday evening, 10th June, to pay their respects to the doctor on the event of his retiring from the medical superintendency of the Toronto General Hospital. Among those present were the Hon. J. J. Foy, Attorney-General of the Province. Others present were Dr. L. H. Barker, successor to Dr. Wm. Osler in the chair of medicine in the Johns Hopkins Hospital, Baltimore, Dr. Thomas Cullen, professor of obstetrics in the same university, both graduates of the University of Toronto; Drs. W. H. B. Aikins, Duncan Anderson, H. B. Anderson, Allen Baines, William Barnhardt, Mr. S. T. Bastedo, Drs. N. H. Beemer (Mimico), G. A. Bingham, C. Bird (Gananoque), E. J. Barrick, Wm. Britton, G. G. Boyd, H. A. Bruce, G. H. Burnham, W. P. Caven, Graham Chambers, G. S. Clelland, E. K. Cullen, J. M. Cotton, W. G. Collison (Lindsay), Mr. C. Cockshutt, Drs. J. L. Davison, C. R. Dickson, P. E. Doolittle, G. Elliott, J. E. Elliott, F. Fenton, J. Ferguson, G. H. Field (Cobourg), J. T. Fotheringham, J. S. A. Graham, F. L. M. Grasett, J. B. Gullen, H. J. Hamilton, A. J. Harrington, A. O. Hastings, C. J. O. Hastings, W. B. Hendry, Mr. J. H. Horsey, Drs. R. M. Hillary (Aurora), H. S. Hutchison, C. Hodgetts, Samuel Johnston, A. J. Johnston, John S. King, Mr. Cecil Lee, Drs. A. A. Mac-

Donald, T. B. Macdonald, G. R. McDonagh, H. A. McCullough, W. J. McCollum, D. N. MacLennan, D. McGillivray, Murray McFarlane, K. C. McIlwraith, Mr. John Massey, Drs. C. F. Murray, T. H. Middleborough (Owen Sound), R. T. Noble, Brefney O'Reilly, Gerald O'Reilly, H. C. Parsons, W. T. Parke (Woodstock), S. G. Parker, W. H. Pepler, A. Primrose, R. A. Reeve, J. F. W. Ross, B. L. Riordan, J. W. Rowntree, R. L. Stewart, S. Singer, E. W. Sprague, R. W. Bruce Smith, G. Silverthorn, G. B. Smith, J. A. Temple, Chas. Trow, T. S. Webster, T. Wylie, D. J. G. Wishart and Messrs. D. R. Wilkie, J. O. Orr, and W. A. Wilson.

Dr. Adam H. Wright acted as chairman of the banquet. It would be giving him but scant praise to say that he filled the position most acceptably. Throughout the entire evening he delighted the audience with his wit and humor on all occasions.

Dr. J. F. W. Ross, Mr. D. R. Wilkie, Hon. J. J. Foy, Dr. T. S. Cullen, and Prof. L. F. Barker made very appropriate speeches, somewhat of a reminiscent character, full of incidents which revealed many of the good qualities of the guest of the evening.

Dr. John S. King was called upon, and spoke as follows:—

"I am indeed happy at this eventful period in the life of Dr. Chas. O'Reilly, to be permitted to give expression to a few of the many thoughts evolving regarding him, and to call up some of the reminiscences of him who has been my earliest preceptor—my Aesculapius—my friend.

"The birth of this fair Dominion on the 1st day of July, 1867, was marked by much rejoicing, and the inauguration of Dr. O'Reilly as Medical Superintendent of the Hamilton Hospital. At the time I entered the hospital, a couple of years later, the Medical Superintendent organized a clinical class, and a junior medical and surgical house staff. Both class and staff were composed that summer of myself. Dr. O'Reilly at once became my preceptor, and few, indeed, there are among preceptors as painstaking in imparting practical knowledge, not only in his clinical work, but in the detailed instruction as to the wound dressing, bandaging, making fracture splints, compounding medicines, and everything connected with hospital work. He was himself a genius at making new and original devices for all manner of purposes.

"His exemplification of treatment of obstinate cases was most original and effective, as may be illustrated by one case, if I may be permitted by the doctor to speak of it. It was a case of persistent hysteria, which had for nearly two years baffled the skill of the older physicians. The woman remained constantly in bed, and vowed she was unable to use her limbs. One day he was seen running into her ward with a pail of water, crying "Fire! fire!" and, stripping down the sheets, told the woman the place was on fire, and to escape for her life, at the same

moment emptying the water over her prostrate form. The application was sudden, so was her exit from the bed, and she made good speed into the corridor. She was cured.

"Another circumstance, which was somewhat exceptional even at that early period of the doctor's experience, I may mention as characteristic of the man, was that of the amputation of the foot and lower third of the leg without the use of an anesthetic. The patient was himself a doctor who objected to chloroform for personal reasons, this long antedated the Oslerized chloroform age limit. Preparations for the operation were effected by first filling a box with stones, to the lid of which box the limb was securely strapped. The patient, meanwhile, was seated in a chair adjacent to the box, and braced his courage with a goblet of what was known in those days as "Old 40 Rod," and smoked a pipe of tobacco. The O'Reilly bandage—now called Esmarch's bandage—was employed to empty the limb of blood. The bandage was previously saturated with Oxide of Hydrogen. It will thus appear that the antiseptic treatment was unique, and, besides being cheap, was always on tap. Result, a bloodless amputation satisfactory and complete. The amputated portion was preserved in a cool place until the recovery of the patient, when with the help of my preceptor, the doctor dissected his own foot to decide what were the remote and proximate causes of the trouble.

"Another matter that differed then from now was the absence of fear from contagion. It was the custom of the preceptor and his pupil to go the rounds daily of the medical, surgical and small-pox wards, the latter patients occupying the old frame building on the grounds at the rear of the brick building. One diagnostic feature of the small-pox cases, as pointed out by my preceptor in his clinic to me, and which was verified in repeated cases, and which permanently impressed me with its value, was that this most disgusting contagious disease gave rise to a most fragrant and agreeable odor when the nose was brought near the pustules, which odor most nearly resembled that of the contents of a freshly broken bumble-bee's honey-comb in the meadow in the summer time.

"Hours might easily be occupied in outlining interesting events of our friend's career; but time forbids, though I cannot refrain from citing one which might have prevented the possibility of this social gathering. Be it remembered that at the time alluded to our friend was a blushing bachelor; and being the disciple of this Aesculapius and, as such, his friend, I occasionally accompanied him in his voyage to the northern shore of that most beautiful bay called Burlington, where resided a worthy lady destined to become, as she since became and continues, the partner in his joys and sorrows. On the particular occasion to which

I refer his call was prolonged well into the evening—and so was mine at the beach—which evening proved to be one of the darkest I ever remember. After my long wait I saw my preceptor's near approach, and found him equally anxious with myself, owing to the rapid approach of threatening storm. By the aid of the electric flashlights we started our row-boat in the direction of the hospital on the opposite shore of the bay. Aesculapius sat at the helm, and his disciple plied the oars. When well on our way the storm broke into violence and fury. Heaven's artillery roared, and electric pyrotechnics at swift-following intervals enabled the helmsman to guide the tiny boat over the vast billows which were rolling higher and higher every minute. We two mortals felt our time had come, and expected every moment to sink to a watery grave. Had it not been for his good judgment and discernment, and correct work at the helm, I would not have been able to tell you anything of the doctor's early career; and if I had not made the most strenuous effort at the oars till the shore was reached, you would not have had our mutual friend as guest here to-night; and free I am to confess before you all, and in which confession I doubt not he will join—that the joint toiling of each for both and both for each proved a bond of friendship never yet broken; and Heaven forbid that it should ever be. We landed safely as you see, though fear turned my hairs to gray, and drove crimson blood into his, thus giving me the appearance of age, and he of youth, which, as you all must know, is the reverse of the true condition. This condition of his will be in his favor in seeking to avoid the chloroform age. But of reminiscence and of humor enough.

“Environment contributes greatly to education, and is a most important factor in the formation of character; and the aggregate of the diversified environment to which our friend was related during a period of over one-third of a century as medical superintendent, first of the Hamilton Hospital, where his natural qualifications, scholastic attainment, practical experience and professional lore had marked him a most suitable man to assume the responsibilities of a similar but more onerous position, to which he was called, namely, that of medical superintendent of the largest hospital in the province, in the Queen City of Toronto. The varied environments in the latter position during a period of thirty years must have occasioned a crucial test of strength of will, power of self possession, of self abnegation, resolution of purpose and other attributes of a strong, well-balanced mind so necessary in one having to consider the varied interests of the trustees, the profession, the patients, the staff and the public. That he met their expectations, and merited their fullest confidence and appreciation, has been or is being proved in a marked degree.

"As the composite picture or aggregate of impressions of the several artists produces the true physiognomy and cranial form of the individual marking well each characteristic, so the constantly occurring, extensive yet varied impressions received from the wise, experienced, skilled, cultured, and fraternal in the medical and surgical world of the province continuous over more than one generation of time must have created the ideal composite representative doctor.

"And such ideal, permit me to say, in my humble judgment, is personified in the mentality, individuality, and professional lore of him whom we to-night in a social way seek to honor as Our Friend.

"As he now withdraws from the activities of a long filled official position to enjoy a season of rest and enjoyment, he will carry with him our friendship, and our best wishes that the afternoon of his life may, like the later leafy days of June, be long, bright and cheerful."

Dr. J. Algernon Temple, in a very neat and feeling speech, proposed the toast of the guest, Dr. O'Reilly. He referred to the doctor's fine administrative abilities, and mentioned his great tact in adjusting all the difficulties that must necessarily arise in a large institution like the General Hospital. He said that Dr. O'Reilly had done much for the medical profession.

Dr. Allan Baines then read the following address:—

TO CHARLES O'REILLY, M.D., C.M.,

Medical Superintendent of the Toronto General Hospital.

SIR,—We heard recently that you had tendered your resignation as Medical Superintendent of Toronto General Hospital, after occupying that position for 29 years. This announcement has caused in us feelings of the deepest regret. We recognize the fact that the present satisfactory conditions of the hospital is largely due to your untiring efforts on its behalf. While we admire the ability you have always shown as an executive officer, we respect more those qualities in you which have caused in us enduring feelings of friendship, and will follow you wherever you go.

We ask you to accept these pieces of plate as a very slight token of our good will, and we, the members of the committee having charge of this function, beg leave to subscribe ourselves, on behalf of the subscribers, your sincere and faithful friends.

J. Algernon Temple, A. H. Wright, Allen Baines, W. H. B. Aikins, H. J. Hamilton, Bruce L. Riordon, J. O. Orr, James F. W. Ross, Samuel Johnston.

After the reading of the address the chairman, Dr. Wright, presented Dr. O'Reilly with two handsome pieces of silver plate, as a souvenir from his friends in Toronto.

Hon. Senator Sullivan, M.D., Kingston, sent a telegram which read, "Toronto General Hospital was a monument of Dr. O'Reilly's reforming genius and love of humanity."

On rising to reply, Dr. O'Reilly was evidently deeply affected by the warmth of his reception, and the good will shown him by so many of his medical friends. He made a very neat speech, recounting the growth of the Toronto General Hospital during the past thirty years. He referred to the handsome treatment he had received from his medical friends in Hamilton when he resigned his charge of the hospital in that city, and from the mayor and aldermen, who tendered him a banquet on that occasion. He did not wish to emphasize anything he had done, but rather what others had done to him. He spoke of the growth of the Toronto General Hospital, now requiring a civil service of over 200 persons. He thought he would not mind resigning from a hospital every year to receive such an expression of good-will as he had when he left Hamilton Hospital, and now on his retiring from the Toronto General. He thanked all present for the magnificent banquet, and the absentees for their cables, wires, letters and messages, and was glad to see so many of his ex-house staff present. He had come to Toronto on January 1st, 1876, at the request of the board, all of whom—C. S. Ross (Chairman), W. T. O'Reilly, Thomas McCrosson, Wm. Elliott, and W. H. Howland—had since slipped away. Judge Patterson and Walter S. Lee had also joined the great majority. The medical staff then consisted of Drs. Aikins, H. Wright, Bethune, Hodder, Graham, Thorburn, who have joined the great majority; and Drs. Geikie, Richardson, Adam Wright, Cassidy, Reeve and Temple, who were all alive, and some of them present.

"I was at Dr. Hodder's last operation, and at Dr. Grassett's first operation, he being the youngest surgeon on the staff at that time, and glad I am to see him here to-night as senior surgeon of the hospital. My first two house surgeons were Drs. Fisher and McArton, then fourth year students, and my two first graduates were Drs. Langstaff and Dr. Stark, both alive to-day. I cannot be accused of being a 'rolling stone,' as I have only lived, in all my life, in my father's house, and in the hospitals of Hamilton and Toronto.

"I am not saying good-bye, but only good-day, and may we all have many happy years. Let us keep young by associating with each other oftener than we do, and with the younger members of the profession like ourselves, for the vitality of youth is very contagious, and will carry us over the chloroform period. The very idea of knowing that I am surrounded by over a hundred friends to-night makes it hard, indeed, for me to put into words the feelings which I should like to express. I shall conclude by saying how sincerely Mrs. O'Reilly, my son and my-

self appreciate this magnificent ovation, your expressions of kindly feeling and your handsome present, and by thanking you for all you have done and said for 'me and mine.' "

The gathering broke up by singing "Auld Lang Syne," and the feeling of all was—

"Thrice happy they whose hearts are tied
By love's mysterious bonds so close;
No strifes, no quarrels can divide,
And only death, fell death can loose."

THE SURGICAL COMPLICATIONS OF PNEUMONIA.

Dr. John H. Gibbon said at the meeting of the Philadelphia County Medical Society that, of the surgical complications of pneumonia, empyema was the most common, and that the success of surgical treatment depended largely upon early recognition. Confirmation of the diagnosis is made with the exploring needle, which procedure should be carried out with as much care as any surgical opening of a clean, healthy cavity. When pus is present, the procedure must be followed by thorough drainage. Dr. Gibbon used chloride of ethyl as an anæsthetic, either alone or as a precursor of ether. In practically every patient beyond the age of twenty, he would do a subperiosteal resection of the rib rather than simple drainage. Masses of lymph were removed by the fingers. There should be two drainage tubes as large as the finger, and they should be stitched in. The keynote of the treatment of empyema was early and thorough evacuation of the pus, with the opening made as low in the pleural cavity as possible.

Another condition which was very common was lung abscess, due to foreign bodies lodged in the bronchi, to tuberculosis, or to pneumonia. Of the three varieties, that due to pneumonia gave the best results from surgical treatment. The diagnosis was attended with more difficulty than that of empyema. Drainage should be carried out exactly as in empyema. In the presence of adhesions between the lung and the chest wall, one of two courses might be followed: The protection of the healthy pleural cavity by gauze packs and immediate drainage of the abscess; or stitching of the lung to the parietal pleura, allowing the formation of adhesions before drainage.—*N. Y. Med. Jour.*

UNIVERSITIES AND COLLEGES.

GRADUATES IN MEDICINE, UNIVERSITY OF TORONTO.

The results of the fourth year examinations in medicine at the University of Toronto are as follows.—

Medals—Faculty, gold medal: W. S. Lemon. First faculty silver medal: G. Ford. Second faculty silver medal: W. Merritt. Third faculty silver medal: M. E. Gowland.

Scholarships—First year: I., J. G. Harkness; II., R. E. Davidson. Second year: I., G. C. Gray; II., W. C. Shier.

Post-graduate scholarship.

The George Brown Memorial Scholarship in Medical Science—For this scholarship W. S. Lemon, A. G. McPhedran, G. G. Little, S. R. Dalrymple, R. H. Bonnycastle, ranked in the order named.

Final examination—The following received degrees with honors: (1) W. S. Lemon, (2) G. Ford, (3) R. H. Bonnycastle, (4) S. R. Dalrymple and G. G. Little, (6) Miss McAlpine, (7) M. E. Gowland, (8) A. G. McPhedran, (9) W. Roberts, (10) C. Schlichter, (11) Miss M. E. Reid.

The following have completed the examination in the fourth year:—
W. H. F. Addison, Miss E. E. Bagshaw, Miss E. Beatty, J. C. Beatty, A. C. Bennet, G. I. Black, T. W. Blanchard, R. H. Bonnycastle, D. H. Boddington, G. Boyd, S. J. Boyd, J. H. R. Brodrecht, F. J. Buller, R. B. Burwell, K. C. Cairns, Miss M. B. Callaghan, W. H. Cameron, M. H. V. Cameron, F. M. Campbell, J. A. Campbell, W. M. Carrick, J. D. Christie, R. L. Clark, H. B. Coleman, T. W. Collinson, F. H. Coone, H. H. G. Coulthard, H. D. Cowper, J. M. Dalrymple, S. R. Dalrymple, C. B. Eckel, W. G. Evans, G. Ford, A. J. Gilchrist, W. C. Gilday, E. A. Goode, M. E. Gowland, D. A. L. Graham, G. W. Graham, F. W. Hall, F. V. Hamlin, J. J. Hamilton, E. C. Hanna, E. B. Hardy, J. E. Knipfel, W. S. Laird, Mrs. L. C. Langstaff, W. S. Lemon, G. G. Little, R. C. Lowrey, E. J. Lyon, Miss M. McAlpine, J. McAndrew, E. A. McDonald, F. F. McEwen, J. A. McKenna, G. L. MacKinnon, F. D. McLachlan, G. D. MacLean, C. McMane, A. McNally, A. G. McPhedran, J. H. McPhedran, T. T. McRae, W. W. Medley, W. Merritt, E. M. Middleton, S. F. Millen, J. I. Morris, F. B. Mowbray, A. G. Munns, C. W. Murray, W. J. O'Hara, C. Powell, W. E. Procnier, J. A. Rae, Miss H. E. Reid, Miss M. E. Reid, W. Roberts, A. M. Rolls, C. Schlichter, J. A. Scratch, A. Sinclair, A.

B. Smillie, W. J. Smith, F. J. Snelgrove, J. H. Soady, J. A. Speirs, C. E. Spence, A. M. Spohn, C. H. Stapleford, A. P. Stewart, A. W. Thomas, R. W. Tisdale, J. H. Todd, W. C. Toll, S. Traynor, L. A. Trueman, R. M. Turner, F. Vanderlip, A. G. Wallis, F. J. Weidenhammer, J. L. Wilson, A. C. Woods.

MEDICAL GRADUATES, UNIVERSITY OF TRINITY COLLEGE.

Final M.D.C.M. examination—Certificates of honor: W. J. Dobbie, (gold medallist), R. R. B. Fitzgerald, (silver medallist), E. F. Atkinson.

Class I.—R. D. Orok, C. A. F. Caviller, W. J. Corrigan, J. A. Kinnear, W. Dales, H. C. Kindred, C. W. Field,

Class II.—A. R. Curtis, H. W. Burgess, G. E. Seldon, T. C. Brerton, J. R. Serson, J. S. Springer, R. J. Carson, B. T. Davey (equal); E. C. A. Reynolds, W. H. Godfrey; G. H. Carlisle, F. W. Rolph (equal); J. A. Gallagher; Miss M. E. Douglass, G. W. Hall (equal); M. J. C. Naftel, H. M. East, J. A. Cullum, W. B. Cassels, J. S. Pritchard, J. Boyce, J. P. Campbell, A. J. Weart, R. M. Cumberland, E. J. Hagan.

Class III.—H. Clendenning, T. H. Argue, F. W. McKee, S. J. Staples, G. S. Strathy, A. E. Murphy, J. G. Middlemas, C. A. McKay, Miss G. L. Urquhart, A. W. Keane, C. Howson; S. Blumberger, W. J. J. Brawley (equal); D. C. Lohead, W. A. Peart, H. A. Abraham, J. M. Dale, D. H. Gesner, B. E. Tughen, G. D. R. Black, W. E. Wallwin, G. F. Milne.

Certificates of Honor.—W. J. Dobbie (gold medal), R. R. B. Fitzgerald (silver medal), E. F. Atkinson.

MCGILL MEDICAL GRADUATES.

A. R. Alguire, Cornwall, Ont.; J. A. Briggs, New Westminster, B.C.; F. F. Brown, Cornwall, Ont.; H. C. Burgess, Sheffield Mills, N.S.; H. A. Chisholm, B.A., Lindwood, N.S.; E. L. Connor, Berlin, Ont.; W. J. W. Costello, B.A., Montreal; C. F. Covernton, Montreal; A. Cumming, B.A., Scottsburg, N.S.; B. H. Dougan, Hampstead, N.B.; W. H. Dowler, Billings Bridge, Ont.; W. Dykes, Nanaimo, B.C.; J. F. Finigan, Oshawa, Ont.; R. W. Geddes, B.A., Deseronto, Ont.; J. H. Gillis, Metapedia, Que.; R. D. Grimmer, St. Andrews, N.S.; J. W. B. Hannington, Victoria, B.C.; J. J. Heagerty, Montreal; E. H. Henderson, B.A., Franklin Centre, Que.; E. G. Henry, B.A., Lennoxville, Que.; G. M. Hume, Leeds Village, Que.; S. S. King, Albert, N.B.; H. A. Leslie, Souris, P.E.I.; D. S. Likely, B.A., St. John, N.B.; W. S. Loggie, Chatham, N.B.; J. H. McDermott, Gordontown, Jamaica; M. E. McKay, Whycocomagh, N.S.; J. D. McLean, Beaton's Mills, P.E.I.;

J. A. McDonald, B.A., Valleyfield, Que.; J. C. McDonald, Peak's Station, P.E.I.; G. J. McIntosh, Dalkeith, Ont.; W. A. McLeod, Finch, Ont.; A. E. T. McMicking, Victoria, B.C.; S. O. McMurtry, B.A., Montreal; W. C. McMurtry, Port Hope, Ont.; W. B. McNaughton, St. Raphael West, Ont.; J. H. Mason, Lachute Mills, Que.; H. C. Mersereau, Doaktown, N.B.; A. P. Miller, Chatham, Ont.; C. F. Moffat, B.A., Montreal; F. W. C. Mohr, Arnprior, Ont.; H. S. Muckleston, M.A., Perth, Ont.; J. W. Mulligan, Omemee, Ont.; J. A. Munro, Pugwash, N.S.; T. R. E. Nelles, Simcoe, Ont.; A. R. Prendergrast, B.A., Montreal; W. G. Pruyn, B.A., Napanee, Ont.; E. T. F. Richards, St. Vincent, B.W.I.; A. R. Robertson, Victoria, B.C.; B. W. Robertson, St. John, N.B.; E. Rommel, Alma, N.B.; L. McD. Ryan, B.A., Newburg, Ont.; A. R. Sawyer, Rosindale, Mass.; W. J. Scott, B.A., Montreal; F. C. C. Scrimger, B.A., Montreal; F. W. Seifedt, B.A., Quebec; E. E. Sinclair, Summerside, P.E.I.; W. A. L. Styles, Montreal; W. A. Smith, Almonte, Ont.; J. A. Sullivan, Arnprior, Ont.; F. J. Tees, B.A., Montreal; J. A. C. Tnull, Antigua, B.W.I.; E. G. Turnbull, Branchton, Ont.; R. E. Valin, Ottawa, Ont.; N. Viner, B.A., Montreal, Que.; C. Waterman, Ogdensburg, N.Y.; P. G. White, Woodstock, Ont.; C. A. Wigle, Wiarton, Ont.; W. M. Wilkinson, Woodstock, Ont.; J. B. Winder, B.A., Compton, Que.; W. C. Winfrey, B.L., Sault Ste. Marie, Mich.; G. O. Wood, Kenmore, Ont.; W. H. Wood, Montreal, Que.; C. A. Young, Ottawa.

DEGREE OF M.D. AND C.M., QUEEN'S UNIVERSITY.

H. J. Bennett, Gananoque; Joseph Chant, Chantry; J. H. Code, Kingston; E. C. Consitt, Perth; J. A. Corrigan, Kingston; W. H. Dudley, Pembroke; J. G. Dwyer, M.A., Kingston; J. Y. Ferguson, B.A., Renfrew; E. A. Gaudet, B.A., Moncton, N.B.; A. W. Girvin, Stella; M. E. Grimshaw, Wolfe Island; R. W. Halladay, B.A., Elgin; J. T. Hogan, Perth; J. M. Hourigan, Smith's Falls; A. H. Hunt, Bridgetown, Barbadoes; M. Lesses, Kingston; M. Locke, Brinston's Corners; T. D. Macgillivray, B.A., Kingston; D. L. McKinnon, Lake Ainslie, N.S.; A. D. MacMillan, Finch; A. E. Mahood, B.A., Kingston; P. A. McIntosh, B.A., Dundela; C. R. Moxley, Kingston; G. R. Randall, Seeley's Bay; M. E. Reynolds, B.A., Athens; R. G. Reid, Kingston; J. J. Robb, B.A., Battersea; W. M. Robb, Lunenburg; B. A. Smith, Hartington; W. A. Smith, Kingston; J. F. Sparks, B.A., Kingston; A. C. Spooner, B.A., Latimer; E. W. Sproule, Harrowsmith; R. W. Tennent, Belleville; John Turnbull, Lowville; C. M. Wagar, Enterprise; F. R. W. Warren, B.A., Balderson; J. W. Warren, Harper; H. J. Williamson, B.A., Kingston.

Medals and Prizes.—Medal in Medicine, A. C. Spooner, B.A., Latimer; Medal in Surgery, M. Lesses, Kingston; Chancellor's Scholarship, J. F. Sparks, B.A., Kingston; Dr. Clarke's Prize in Mental Diseases, equal, T. D. Macgillivray, B.A., Kingston, and E. W. Sproule, Harrowsmith; Dr. Mundell's Prize in Medical and Surgical Anatomy, J. G. Dwyer, M.A., Kingston; Dean Fowler Scholarship (third year), Elmer Bolton, Phillipsville; MacCabe Prize in Pathology, A. E. Baker, Osnabruck Centre; Faculty Prize (second year), F. H. Trousdale, Hartington; New York Alumnae Association Prize in Physiology and Histology, J. P. Quigley, M.A., Kingston; Hayunga Prize in Pharmacology and Therapeutics, M. L. Burke, Port Antonio, Jamaica; Hayunga Prizes for best dissection made by two students, A. T. Spankie, Wolfe Island, and M. J. O. Walker, Kingston; Wm. K. Warner & Co. Prize for best examination in Anatomy of 1st year, C. T. C. Nurse, Georgetown, British Guiana; House Surgeons in General Hospital, A. C. Spooner, B.A., Latimer; M. Lesses, Kingston; H. J. Williamson, B.A., Kingston; and Next in order—J. F. Sparks, B.A., Kingston.

GRADUATES IN MEDICINE, MANITOBA UNIVERSITY.

M. D.—William Wilson Amos, Robert Naismyth Burns, B. A., Frederick Todd, Cadham, B.A., William Andrew Clark, Thomas Andrew Cohoe, George Hector Craig, B.A., Robert Edward Davis, James Duxbury, Albert Ernest Finley, William Jesse Grant, Benjamin Arthur Hopkins, Marsden Frank Ross Irwin, Robert Duncan Kippen, Arnot Leishman, David Park Miller, B.A., Harry Morton Murdoff, Harold Wigmore McGill, Charles James McKinnon, William John Mactavish, William C. Nickle, Richard R. Procter, George Walter Rogers, Albert Henry Rondeau, Herbert Samuel Sharpe, Harry Blackett Stacpoole, David Chester Thompson, Wilfrid Tucker, John Alexander Valens, Frederick Charles Walton, George Albert Woodruff, Joseph Theodore Wright.

C.M.—William Andrew Clark, George Hector Craig, B.A., Albert Henry Rondeau, Herbert Samuel Sharpe.

GRADUATES IN MEDICINE, DALHOUSIE UNIVERSITY.

Edward Blackaddar, M.A., (Acad.); John Archibald Ferguson, B. Sc., (Dal.); Daniel Robert McDonald, George Gladstone MacDonald, George Arthur McIntosh, Victor Neil MacKay, Mary MacKenzie, Alexander W. Miller, B.A., (St. F. X.); James Alexander Murray, John Ignatius O'Connell, B.A., (St. F. X.); James Adam Proudfoot, Peter James Wallace.

CURRENT CANADIAN MEDICAL LITERATURE.

The Canadian Practitioner, June, 1905.

CYSTIC DEGENERATION OF THE VILLI OF THE CHORION AND ITS RELATION TO CHORION EPITHELIOMA.

This paper was read by Dr. C. J. C. O. Hastings last year at the Ontario Medical Association, being then well received. It is an address of much merit. The writer contributes three cases to the growing literature upon this interesting subject. He reviews the history of the advance of our knowledge regarding this condition. In 1853, Virchow taught that the degeneration was due to a myxoma of the endochorion. In 1895, Marchand showed that it was the epithelial covering of the villi that was mainly affected, involving the syncytium and Langhan's layers of cells. The etiology is still in doubt, as both a foetal and a maternal causation have been advanced, but the latter appears to be favored by the leading modern pathologists. Syphilis, tuberculosis and endometritis are given as causes, and Virchow thought the trouble was in the decidua, which underwent degenerative changes. It would seem that the most likely cause is some disturbance in the maternal circulation of the parts. Most of the recorded cases were in multiparæ, and between the ages of 20 and 30. The condition occurs once in 2,000 conceptions.

The symptoms usually appear before the end of the tenth week, and consist of the evidence of pregnancy, the disproportionate size of the uterus, and a bloody or sero-sanguineous discharge. The only trustworthy sign, however, is the discharge of the vesicles.

The treatment consists in emptying the uterus at once. For this purpose the cervix must be dilated by means of a Barnes bag, or a metal dilator. The fingers and the ovum forceps are employed to clean out the uterus. Great care must be taken not to rupture the thin uterine walls. Hæmorrhage is controlled by pressure on the abdomen, the hypodermic injection of ergot, and hot intra-uterine douches. The curette should not be used, unless for the removal of embedded cysts. The utmost aseptic precautions should be taken.

The cysts vary in size from a current to chestnut. These cysts are attached to each other somewhat like a string of beads, rather than by a short pedicle to a common stalk. The first of the series springs from the outer surface of the chorion. When the cysts are discharged in a bloody fluid, they resemble white currants in red currant juice. In

some cases no embryo is found, while in others a blighted one is still present. The patient should be kept under observation for some time, owing to the risk of deciduoma malignum occurring.

This latter condition is preceded by hydatidiform mole in about thirty per cent. of the cases. Snger was the first to notice this relationship, but he inclined to the view that it was a sarcoma, Gottschalk, Williams and Teacher have more recently held that deciduoma malignum is of foetal origin and arises from the epithelia of the chorionic villi. It is therefore an epithelioma and not sarcoma.

THE SYMTOMATOLOGY AND DIAGNOSIS OF SMALLPOX.

Dr. G. E. Greenway, of Toronto, contributes this paper from a study of 33 cases. He states that the incubation period is 12 days, but this may be exceeded by 5 days, or the incubation period may be 5 days less. In some cases the initial symptoms are very slight, but in others they are quite severe, such as chills, intense frontal headache, backache, and pains in the thighs. There is generally vomiting and the temperature may rise to 103 to 106 F. At this stage there are no definite diagnostic features. The fever continues for three or four days, falling to about normal on the appearance of the papules. Preceding these papules, there are red macules, which are minute in size and disappear on pressure, and are first seen on the forehead and wrists. These may be rather general and resemble scarlet fever.

The rash passes through the several stages of macule, papule, vesicle, pustule, and crust. In varioloid cases, the disease frequently aborts between the macular and papular, or between the papular and vesicular stages, there being no, or very little, suppurative or secondary fever. The usual course of events is that on the fourth day the macules appear on the forehead, on the fifth day these are all over the body, and those on the forehead are papules and shotty. On the sixth day the papules become umbilicated vesicles and on the eighth day these are globular pustules, the surrounding skin being congested and swollen. These vesicles and pustules vary in size from a large pin's head to a split pea. The vesicles on the palms of the hands and soles of the feet may be six or seven days later in appearing.

The temperature usually falls on the fourth day and again rises on the sixth or seventh. In some cases there is no interval when the temperature falls. This secondary or suppurative fever usually lasts about five days, so that about the twelfth day the pustules begin to dry and scale off. By the fifteenth day desquamation may be advanced.

The pustules may become confluent, which takes place most frequently on the face and hands, as these are the points where the eruption begins. Delirium is most likely to occur about the tenth day.

In the hæmorrhagic type the symptoms are severer, and the mucous and conjunctival membranes are injected and bleed. Hæmaturia, malæna and hæmatemesis are met with; and bleeding into the pock may occur. The earlier the hæmorrhage the worse the prognosis.

Laryngitis and pharyngitis are common. There is usually an eruption of pustules in the buccal cavity. The eyes are also the seat of a very troublesome catarrhal and suppurative inflammation. In some cases, convalescence may be accompanied by a crop of boils. The drying into crusts begins on the face and goes over the body in the order the rash came on. Usually early in the third week the pustules rupture.

The Dominion Medical Monthly, May, 1905.

CROUP.

Edwin Seaborn, London, Ont., discusses the subject of "croup," using the term as meaning those cases of spasm of the muscles of the larynx, causing closure of the glottis. When the glottis closes respiration is stopped, when it is partially closed respiration is noisy. He deals with the subject under the two headings of causes and treatment.

The muscles of inspiration are stronger than those of expiration, also those that close the larynx are more powerful than those which open it. If these sets of muscles are stimulated together the larynx is closed and inspiration is forced. In other words those that open the larynx are overcome and the inspiratory muscles make an effectual effort to overcome the expiratory muscles.

The respiratory centre is located in the medulla, and, though automatic in its action, it is under the influence of the higher cerebral centres and responds reflexly to the action of certain nerves as the glossopharyngeal, the pneumogastric and the spinal accessory. In some diseases, croup-spasm is a symptom. Thus it results from the minute hæmorrhage in hydrophobia, from the degenerations in locomotor ataxy, and from the disturbed cerebral centres in epilepsy, in hysteria, and boys about puberty. Laryngismus stridulus is a neurosis.

Treatment must be directed to the cause. Generally, it is the mucous membrane somewhere, or the higher cerebral centres, that are at fault.

The treatment may resolve itself into the correction of other conditions as enlarged tonsils, adenoids, chronic laryngitis, a foreign body in the ear, or some abnormal state of digestion.

When the nervous system is primarily at fault tonics, good diet, and proper hygienic care are requisite.

In croup it is necessary, therefore, to be on the alert for the two conditions—some inflammation of a mucous membrane, and some instability of the nervous system.

THE STATUS OF SUPRARENAL THERAPY.

Dr. Samuel Floersheim, of New York, contends that the introduction of the suprarenal gland principle into practice is one of the most important advances during the past 15 years. The two forms in which the suprarenal gland is used are the dried and powdered gland, and the alkaloid adrenalin chloride.

The powder is given internally in 3 grain doses. The active principle is administered in the form of a solution, 5 to 15 drops of a solution varying from 1 in 10,000 to 1 in 1,000. To get the best results, it should be given frequently, every one to three hours. It may be placed under the tongue, when it is rapidly absorbed. It is not necessary to give it hypodermatically. When it is dropped under the tongue the effects of the remedy are noticed in about 20 seconds.

It causes much pain by the subcutaneous method, and in solutions of 1 in 1,000 may cause gangrene.

Adrenalin chloride is a valuable remedy in organic diseases of the heart, even when strychnine and digitalis have failed. In diseases of the respiratory organs it is of much value in laryngitis, bronchitis, pneumonia, the cough of phthisis, in hæmoptysis, and asthma. In these cases it lessens the congestions, the tendency to bleed, and stimulates the heart. In hæmorrhages from any portion of the body, the internal administration of adrenalin chloride is the most valuable of all remedies. Unless the bleeding is from a large vessel, it is almost at once stopped. It is particularly valuable in the so-called bleeders. In apoplexy its timely administration is very useful. If given in the earliest stage of apoplexy, the attack may be arrested. In all forms of uterine hæmorrhage, no matter from what cause, it is a most valuable remedy. It arrests hæmorrhage, induces involution and lessens the risk of infection. In hæmorrhages from the stomach and bowels, it is of undoubted value. It is also of much use in controlling bleeding from any part of the genito-urinary organs. Its local application is well known in

cases of the eye, ear, nose, and throat. It has been administered with excellent results in the collapse of chloroform and in surgical shock. One drop of 1 in 1,000 occasionally under the tongue is invaluable.

The Montreal Medical Journal, May, 1906.

SOME CONDITIONS ASSOCIATED WITH MOVEABLE KIDNEY.

In this paper, Dr. John M. Elder, gives an interesting resume of the most important symptoms and pathological conditions met with in moveable kidney. He points out that many other troubles are often associated with this state of the kidney. These are hernia, gastric symptoms, constipation, diarrhoea, jaundice, appendicitis, urinary symptoms, renal colic, calculus, pyelitis, chronic nephritis, neurasthenia, general enteroptosis, and uterine abnormalities.

The moving of the kidney causes nerve disturbances and dragging upon the peritoneum that may be responsible for some of these conditions. The results of moveable kidney are such that effect the organ itself, and those in other organs due to this mobility.

Under the first heading, there may be temporary congestion of the kidney a kinking of the vessels and ureter, extreme pain and hæmaturia, albuminuria, hydronephrosis, and polyuria.

Associated conditions in the abdominal cavity are very common with moveable kidney. All the viscera may undergo ptosis on account of this state of the kidney. The kidney does not slip down behind the peritoneum, but drags down the peritoneum with it as a sort of mesonephron. The peritoneal folds around the foramen of Winslow, the ligaments at the hepatic and duodenal region become stretched or rendered tense, and colic produced. Many cases of chronic appendicitis are attributable to moveable kidney. Serious results in the gall bladder and biliary ducts have been caused by this condition of the kidney. Irregularities of the bowels, such as constipation and diarrhoea have been assigned the same cause. Glycosuria has also been found in connection with it. Many nervous disturbances arise from the same cause. It is readily seen how the close connection of the sympathetic nerves with all the viscera would give rise to reflex symptoms, if the kidney set up irritation in its nerve supply.

MICROPTHALMUS.

Under this title, Dr. J. W. Stirling describes a case of persistent pupillary membrane, anterior synechia and central opacity of the cornea. The eye ball was microphthalmic in type and there was a gray opacity over the central part of the cornea. During embryological development the pupillary membrane became adherent to the cornea as the result of some inflammation. A good epitome of Treacher Collin's views are set forth.

CONGENITAL ABSENCE OF THE UTERUS AND VAGINA.

Dr. A. Laphorn Smith reports a case of this kind. The patient was 21 years of age, and was engaged to be married. On examination there was no appearance of a vagina, though the labia and perineum appeared normal. On making a rectal examination, it became clear that there was also an absence of the uterus. A careful dissection was made of the tissues between the bladder and the rectum, taking care not to open either of these. This continued until the finger could be introduced four inches. There was only cellular tissue in this space. The cavity was packed with sublimated gauze. She made a good recovery and wore a glass tube to keep the new formed canal open. Subsequently she was operated on for appendicitis, when it was found that the uterus, the vagina and the right ovary and tube were absent, but the left ovary and tube were present.

AN UNUSUAL CASE OF THYROIDECTOMY.

Dr. F. J. Shepherd gives the history of a case of a woman, aged 38, who suffered from a greatly enlarged thyroid gland. Both lobes were enlarged and also the thymus. The anaesthetic used was equal parts of chloroform and ether.

The operation was a very difficult one. The incision was made along the inner border of the right sternomastoid muscle. The upper thyroid artery was tied. There were many adhesions. The inferior thyroid artery and the middle thyroid vein were tied. The recurrent nerve was found embedded in the lobe, and was carefully freed. The left lobe was removed through the same opening. There was a sharp bleeding point which was taken up by a pair of forceps. In doing so the nerve was caught and immediately there was very stertorous breathing. The forceps were removed, but a little later, it was necessary to perform tracheotomy. The patient made a good recovery.

THE JUBILEE OF LARYNGOLOGY.

This very interesting paper by Dr. H. S. Birkett is an address before the students of McGill Medical College. It deals with the laryngoscope and its inventor, Manuel Garcia, who recently celebrated his hundredth birthday. The writer gives a good account of the discovery of the laryngoscope by its eminent inventor, who was a professional voice trainer, and taught Jenny Lind and many others.

The Maritime Medical News, May, 1905.

THE RESIDIUM.

This is a continuation of Mr. G. T. Irving's paper in the previous month's issue. He deals at great length with the influence of poverty and intemperance in causing a certain number to sink into the lower levels, and become criminals or mentally deranged. He draws attention to the effects of these conditions upon the next generation, pointing out the increase in the numbers of juvenile criminals and imbeciles. He quotes Mr. John Burns, M.P., to the effect that in Britain the families who use alcoholic liquors spend on an average on these beverages £18 15s 4d.

THE PREVENTION OF TUBECULOSIS.

Dr. J. W. Daniel, M.P., for St. John, spoke strongly in the House of Commons in favor of the Government taking steps to aid in the prevention of tuberculosis. Dr. Daniel is an optimist and believes the disease can be eradicated. He points out that five hundred years ago there were 19,000 leper houses in Europe, and 95 in England alone. Now leprosy was a disease of the past. So it was possible to eradicate tuberculosis, and the results were well worth the effort and the cost in doing so.

THE ARREST OF POISONING IN WOUNDS.

Dr. J. J. Reid reports three cases of poisoned wounds treated by the application of strong nitric acid to the infected surfaces. The results in all cases were satisfactory. If necessary the parts may be incised and cocainised prior to the application of the nitric acid.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

A CASE OF HÆMOCHROMATOSIS WITH CHRONIC PARENCHYMATOUS NEPHRITIS.

This condition, which derives its name from the deposit of pigment in the cells of the liver, has been observed in cases of anaemia so far as the liver is concerned, but Von Recklinghausen in 1889 described 12 cases of a general deposit throughout the cells of the organism.

There are two varieties of pigment, which are distinguished from each other by their distribution in different tissues of the body and by the dissimilarity of their microchemical reactions. One of these deposits is called haemosiderin, and, as its name implies (*Eideros*, iron), it contains iron, and can be demonstrated in the tissues by means of ferrocyanide of potash and dilute hydrochloric acid, which gives the Prussian-blue reaction. This haemosiderin is usually deposited in the cells of the various glands of the body, and in a typical case the granules can be detected in the secreting and other cells of the liver, pancreas, stomach, intestines, and kidney, and in the endothelial cells of veins and capillaries. The second pigment is called haemofucsin, and does not give the characteristic reaction for iron, but when stained by methylene-blue the granules take on a dark-blue stain. This granular deposit is not present in the secreting cells of the glands, but is found in the connective-tissue cells of the liver, pancreas, and spleen, and in the muscle cells of the heart, stomach, intestine, and larger blood vessels.

It is thought that owing to the absorption of some poison, or through some other unknown cause, the blood undergoes a profound change. The poisoned and functionless red blood corpuscles are sorted out by the liver and the cells take up the haemosiderin from the injured corpuscles. Frequently no anaemia is present in these cases and as no great blood destruction takes place it is probable that the pigmentation is caused by the injured cells not being able to carry on the normal destruction of blood pigment, and it thus accumulates in the parenchymatous cells of the liver and other viscera. The poison itself may also injure the cells. The same cause may produce changes in the pancreas, and this is usually followed by diabetes.

In *The Maryland Medical Journal*, May, Stokes and Latane report the following case:

J. H., age 52 years, white, male, married, shipmaster. Patient was brought to the hospital from his vessel in a semi-comatose condition, from which he could be roused with difficulty. His coma gradually increased, and he died in an uraemic condition without convulsions at the expiration of 48 hours.

There was obtained a scant history extending back some months of gradually-increasing ill-health, with headache and general disinclination for exertion, culminating in anasarca, ascites, and shortness of breath. He had been confined to bed for several days prior to the arrival of his vessel. He had contracted a chancre five months previously, had been on treatment, and was a constant and hard drinker of gin.

The liver, pancreas and kidneys showed the greatest changes, the spleen was enlarged with increase of splenic pulp.

The liver showed great increase of connective tissue, especially in the portal spaces, the liver lobules are smaller than normal and are invaded by connective tissue bands with proliferation of the bile ducts. Under the high power the nuclei of the liver cells are seen to be obscured by a deposit of granules brownish-yellow in color which on test with hydrochloric acid are proven to be haemosiderin. The pancreas shows a connective tissue proliferation but a more normal appearance than the liver, the pancreatic cells are lessened in number but their nuclei are visible, the yellowish granules are everywhere apparent. The kidney shows a well marked chronic diffuse nephritis of the parenchymatous variety, there is not so much deposit of the iron-bearing granules as in the other organs.

AN IMMUNE BODY CAPABLE OF INHIBITING THE DEVELOPMENT OF CANCER IN MICE.

In the April number of *The Johns Hopkins Hospital Bulletin*, G. H. A. Clowes, Ph. D., gives a preliminary report on some investigations pursued by Dr. Gaylord and himself on this subject, suggested by the fact that while there are many authentic cases of recovery from carcinoma, no attempt has been made to determine the effect of the serum of these spontaneously recovered cases upon those suffering from a similar affection. Mice were used for these experiments, inoculation being made from two supplied by Prof. Jenpen of Copenhagen.

The method pursued was to treat in each case two affected mice at the same time, one with injections of blood derived from mice recovered from the disease, the other with a similar amount of ordinary mouse's blood. Up to the time of making the report, experiments had

been carried out on twenty mice; and, of those treated with repeated doses of the so-called immune serum, one only has failed to show some effect, which may be attributed to the serum and all are alive. Of those treated with normal serum five are already dead and the others have now tumors larger than those for which they served as controls. Tumors weighing more than three or four grains were not appreciably affected by the serum, but the cachexia from which the mice suffer in the last stages was in all cases alleviated. The serum or mice cured of their tumors by the above treatment was found to possess a certain degree of activity, but not to the extent exhibited by that of the spontaneously recovered cases.

It must be borne in mind that these mice tumors are very irregular in their development, both as to time and size, so that one must be cautious in drawing conclusions from any limited number of experiments but in these cases the tendency to recover was very slight, in only one case did a tumor larger than a buckshot recover spontaneously in the series of second inoculations, which were very virulent. Test tube experiments with this serum make it extremely improbable that it can be classed among the cytolytins; it does not exert any more marked haemolytic effect than the blood from the normal animal. Sections of tumors in cases thus treated show changes comparable to simple atrophy, increase in connection tissue, and reduction in the epithelial elements. On the whole, there seems to be evidence of the existence of immune forces antagonistic to the development of cancer.

THE DRINK HABIT.

Dr. C. W. Hidden, of Newburyport, Mass., has for some years urged the curability of the drink habit by a method of treatment for which he claims credit of bringing before the medical profession. Stated in his own words we find it thus given in the *Medical Brief*.

"The remedy that I employ is a combination of cinchona rubra, strychnia nitras, capsicum annum, and avena sativa. This destroys the craving for liquor, and starts the patient on the road to health, strength and moral control. Only the once intemperate can appreciate what it means to lose that awful consuming thirst for strong drink.

"My discovery removes the appetite for liquor, restores the system to normal or healthy tone. No man in health craves strong drink. I bend every energy, utilize every means at command, to restore the drink patient to health, to make him sound in body, brain and mind. When this has been accomplished, the reign of old king alcohol is at an end.

"The primary sensation on taking the medicine is one of delicious

warmth, which extends to all parts of the body. Patients frequently say, 'The first dose made me thrill and glow from the crown of my head to the tips of my toes.' This is not to be wondered at when we recall the condition of the patient prior to beginning treatment : stomach irritable, nerves out of tune, brain in a jangle, vital powers depressed, a weak, trembling, physical wreck. It is well worth while to reverse all this : To suffuse the body with warmth and power, to find the nerves steadying down, the brain clearing, the stomach able to retain food, an awakening sense of manhood and of growing control over a debased appetite."

BACTERIA ON MONEY.

A number of experiments have been carried on by the New York Board of Health, with the following results : The germs of only two diseases have been experimented with—tuberculosis and diphtheria—and both of these may be communicated from one person to another on money. Moderately clean bills obtained from a cheap grocery store held 2,250 living bacteria, and dirty bills held 73,000. Pennies held only 26, and dimes 40. The experiment was made of placing pennies, nickles, and dimes in the mouths of children suffering from diphtheria. The coins showed no trace of diphtheria bacilli twenty-four hours afterward. The report sums up the results reached thus : Pennies at the end of twenty-four hours gave a growth of diphtheria bacilli when fairly dry; at the end of forty-eight hours they gave no growth. Nickles at the end of twenty-four hours gave a growth at times, but not at others; at the end of forty-eight hours they gave no growth. Dimes gave a growth at times, not at others; in forty-eight hours the growth had disappeared. Paper money at the end of forty-eight hours gave a growth and continued to do so at times for a month. The number of bacteria found alive on paper was 170,000, on nickel about 40,000, and on copper none. The data thus obtained ought to convince the authorities what a menace soiled bills are to the public health.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.
Chief Surgeon Canadian Pacific Railway, Ontario Division : Surgeon Toronto Western Hospital.

TREATMENT OF THE STUMP IN APPENDISECTOMY.

In a letter of Dec. 12th, 1904, to the editor of the *St. Louis Medical Review*, Edmund Owen, Consulting Surgeon to St. Mary's Hospital, London, says :—

As is well known, a very usual way of dealing with the stump is to turn back a considerable cuff of peritoneum, and then, having tightly

surrounded the naked fibromuscular tube near its base with a fine ligature, to bring forward the peritoneum again, and to stitch it over the raw end of the stump. Probably before the cuff has been drawn forward the mucous membrane lining the end of the stump has been scraped out with a small sharp spoon, and the raw tissue disinfected by a drop of pure carbolic acid. In most cases where this treatment has been carried out, certainly in nearly all in which the operation has been resorted to in the "quiet stage," the result has been good. Nevertheless, one cannot regard it as the most perfect way of operating, for there is always the risk—notwithstanding the presence of the carbolic acid—of the tubular piece of the appendix between the ligature and the cut end becoming a small incubation chamber, and of an abscess being formed beneath the cuff of peritoneum, which has been stretched over the end.

I have done the operation in this way many times, and, like my confreres, I suppose, I have now and then been annoyed by the formation of a small, deep seated abscess.

The way in which I now try to deal with the stump is by cutting it as close to the large intestine as possible, turning it into the bowel, and stitching up the opening after bringing together the neighboring parts of the peritoneal coat.

Seemingly, some surgeons do not mind if they leave a rather long stump; my belief is that there ought to be *no stump* left.

THE TREATMENT OF CONGENITAL TALIPES EQUINOVARUS.

Dylion, *Arch. de Med. des Enf.* says that much has been written upon the subject of club-foot, but the writer believes that the bloodless method of treatment is steadily gaining in favor.

Having completely cured several complicated cases of club-foot by manipulation alone, the author draws the following conclusions :

(1) By methodical manipulation congenital talipes equinovarus may be completely corrected.

(2) If the result proves to be unsatisfactory, it is proof that the method was faultily applied, or that it was not continued long enough.

(3) The treatment should not be regarded as auxiliary, but as the principal and exclusive method.

(4) By manipulation one restores the normal form as well as the function of the member.

(5) Correction of the position having been obtained, the treatment should be continued for a time in order to prevent recurrence.

(6) In the intervals of treatment the foot should be supported by a small splint.

(7) It is desirable to begin treatment as soon after birth as possible.

REDUCTION OF STRANGULATED HERNIA.

Fischer, *Therapie der Gegenwart*, No. 3, 1905, finds that by applying an ether spray to strangled hernia it may be reduced without difficulty or danger. The patient lies on his back with the pelvis raised and knees flexed. The skin surrounding the rupture is smeared with vaselin and covered with cotton. The ether spray is then directed over the rupture and inguinal canal; the intense cold if continued for one to two minutes condenses the tissues, blood-vessels, and the gass in the distended bowel. Taxis is then made, usually with success; if it fails, the procedure is repeated in fifteen minutes.

ENTEROSTOMY.

J. W. Long, *American Medicine*, April 8, 1905, says that enterostomy is always a life-saving measure, never an operation of choice. Enterostomy is not indicated when a more ideal surgical procedure is feasible.

In the hands of an experienced, carefully trained abdominal surgeon, capable of dealing with grave emergencies, an enterostomy is rarely resorted to; but the better the surgeon, the more quickly will he adopt any measure that will save his patient.

Every abdominal surgeon, according to the abundance of his material, must find cases in which only an enterostomy can with propriety be done.

When an enterostomy is indicated, to hesitate is to lose your patient; to operate promptly, dexterously, and with celerity means to tide your patient over the imminent peril and spare him for future consideration.

RADIOTHERAPY AND SURGERY, WITH A PLEA FOR PREOPERATIVE RADIATIONS.

William T. Morton *Medical Record*, March, 1905, draws the following conclusions :

1. Radiation treatment exerts a retarding effect upon the growth of some cancers.
2. It cures some cases—the ratio to operative measures is not here discussed.
3. Preoperative radiation will increase the ratio of cures by operation.

4. Preoperative radiation transforms some inoperable cases into operable cases.

5. Preoperative radiation is recommended as a precautionary measure, probably quite as important as preoperative antiseptic preparation for surgical operation.

ALLEGED DISCOVER OF SYPHILIS MICROBE.

The Paris correspondent of *The Times* reports what is described as an "important medical discovery," viz., the identification of the microbe of syphilis. He reports that at the last sitting of the Academy of Medicine of Paris. At this meeting, says *The Times*, Drs. Roux and Metchnikoff, of the Pasteur Institute, lent the authority of their names to the assurances which reached the scientific world from Berlin a few days ago as to the probable identification of the microbe of syphilis. This microbe would appear to have been observed for the first time three years ago by two students at the Pasteur Institute—MM. Bordet and Gongou. The late director of the Institute, M. Dujardin, had long sought to hunt down the microbe of this malady in the Hospital St. Louis, but all his researches were vain. Previously several observers had detected the presence of certain bacilli which for a time put investigators upon a false scent. MM. Bordet and Gongou in their observations noted an infinitesimal being, long, pale, refractory to staining, and so extremely evanescent that when they looked for its fellows they could never find them. This microbe would seem, however, to be the one now observed by Herren Schaudinn and Hoffmann in twenty-six cases and in varying conditions of the malady. It has been given the name *spirochæ pallida*. Its length is from four to fourteen-thousandths of a millimètre, while its breadth is a quarter of a thousandth of a millimètre. It bears a family resemblance to other well-known microbes, some of which are quite inoffensive, and are to be found in human mucus. Drs. Metchnikoff and Roux, in their communication to the Academy of Medicine, announce that they, too have found the Schaudinn bacillus. During the last two weeks they have observed this microbe four times out of six in the human cases examined, and Herr Schaudinn, to whom the preparations have been sent, recognizes them as identical with his. But, more striking than all, M. Metchnikoff has found the microbe in the monkeys that he has had inoculated. He found it four times out of six, and in one case the discovery had special importance, for the *spirochæta pallida* was identified at a point on the monkey's body, and at a certain stage of the affection, in which no possible confusion could be made with the spiral bacilli of certain mucuses. *Med. Times and Hosp. Gazette.*

GYNAECOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynaecologist, Toronto Western Hospital; Consulting Surgeon Toronto Orthopedic Hospital.

WHAT SOME AUTHORITIES SAY REGARDING THE CO-EXISTENCE OF OVARIAN CYSTS WITH PREGNANCY.

Herman, Diseases of Women, says. "If the tumor is small and the patient near term, ovariectomy may be postponed till after delivery; but except in such cases the proper treatment of an ovarian tumor complicated by pregnancy is its immediate removal. Ovariectomy must be done sooner or later, and experience has shown that the presence of pregnancy little, if at all, increases the danger."

Garrigues, Gynecology, 1905, page 345, says: "When the ovarian cyst is complicated with pregnancy, it is *sometimes* better to postpone the radical operation till after the puerperium and afford temporary relief by tapping."

Penrose, Diseases of Women, 1904, page 389, says: "Pregnancy is no contra-indication to operation. In fact, the dangers of obstructed labor, rupture of the cyst, and torsion of the pedicle urgently call for immediate operation in such cases. Pregnancy usually progresses to full term after operation."

Howard Kelly says: "The proper treatment of ovarian tumors is by extirpation as soon after the discovery of the tumor as the physical condition of patient will permit."

"Ovariectomy as a rule is the simplest and the safest abdominal operation in pregnancy to both mother and child; but its dangers are increased by extensive adhesions, and abortion is liable to be produced by a protracted operation with much manipulation of the uterus."

Jardine, Clinical Obstetrics, 1903, page 200, remarks: "If the tumor is discovered early in pregnancy it should be removed at once, even though it is small, as the risk of twisting of the pedicle is considerable. If the pedicle should become twisted, immediate operation is called for. If the tumor is not discovered until within a few weeks of full time, I should be inclined to wait to full time, unless, of course, there should be a good reason for operating at once. The reason for this is, that the abdominal wound would not have time to become consolidated before labor came on, and it would probably yield."

Dudley, in his work on Gynecology, 1904, page 465, states: "Ovarian cyst complicated by pregnancy may give rise to the following accidents:

1. Twisting of pedicle,
2. Abortion.

3. Obstruction to labor, necessitating Cæsarean section or ovariotomy during labor. From these and other possibilities the danger of labor to child and mother is extreme. In the complication of pregnancy the necessity for an early, rapid, gentle, aseptic ovariotomy is apparent."

Bland-Sutton in his *Diseases of Women* of 1904, page 354, says: "Ovarian Tumors and Pregnancy." "When an ovarian tumor complicates pregnancy, it is not too much to state that the life of the woman is in peril through the period, and the danger increases with each succeeding month of gestation, and often culminates with labor or abortion."

"During pregnancy the chief dangers are :

1. Axial rotation of the tumor ;
2. Rupture of the cyst ;
3. With large tumors, impediment to respiration ;
4. Incarceration of the tumor in the pelvis.

"From a study of a large number of records the following results may be stated :

"These facts make it clear that pregnancy exerts a baneful influence on ovarian tumors ; and ovarian tumors are, as a rule, inimical to successful pregnancy."

1. Before the fourth month of pregnancy, single or double ovariotomy is attended with a very low mortality, and the risk of disturbing the pregnancy is small.

2. The removal of a parovarian cyst during pregnancy is more liable to be followed by abortion than single or double ovariotomy.

3. After the fourth month the risk is that of an ordinary ovariotomy, but the chance of abortion increases with each month."

"It is a fact that ovariotomy may be safely carried out between the eighth and ninth months of gestation, even when the tumor is incarcerated in the pelvis without precipitating labor.

"It may be said that when an ovarian tumor lies high in the abdomen delivery exercises a baneful effect on the tumor, but when the ovarian tumor occupies the pelvis it exercises a baneful effect on the uterus and its occupants :

1. When the tumor is situated above the uterus the following accidents may happen : (a) Rupture of the cyst ; (b) axial rotation ; (c) supuration of the cyst.

2. When the tumor occupies the pelvis, it offers mechanical impediment to delivery. The foetus invariably dies in these circumstances. The following accidents have happened : (a) Rupture of the cyst ; (b) rupture of the uterus, (c) rupture of the vagina, (d) extension of tumor through the anus.

"The broad rules for treatment may be formulated thus :

(1.) When an ovarian tumor is discovered during labor, and it impedes delivery, ovariotomy should be performed.

(2.) If the tumor offers no obstacle to the passage of the foetus, it should not be interfered with until after the puerperium, unless unfavorable symptoms arise.

"It is now well known that ovariectomy can be successfully performed even while labor is in progress—that the operation in no way interferes with the contraction of the uterus. Ovariectomy can also be successfully performed in the puerperium without in any way interfering with either the involution of the uterus or lactation. Therefore it cannot be too strongly urged that when a puerperal woman known to possess an ovarian tumor exhibits unfavorable symptoms, ovariectomy should be resorted to without delay."

UTERINE FIBROIDS.

J. Wesley Bovee, Washington, D.C. (*Journal A. M. A.*, May 27) says that his former publication on the occurrence of uterine fibroids after ablation of the appendages was the only publication in the literature on the subject, except the report of a case by Hey Groves and some incidental references in other articles. He republishes here his own four cases and that of Dr. Groves. Such occurrences throw serious doubt on the theory of the efficiency of the removal of the appendages to produce atrophy of existing fibroids, which has been accepted to a considerable extent in Europe and in this country. The possibility of the growths having existed in an undeveloped state before the ablation is admitted, but not considered probable, as is also that of pelvic adhesions acting as a causal factor. That an infectious process of some degree of variety in the uterus may bring about this fibroid degeneration is deemed by the author as highly probable, though problematic. The only adequate theory he finds on which to base a cause for the development of fibroid after double salpingo-oöphorectomy is that of the endarteritis noted by Benckeiser, but Bovee wishes the relation was clearer and better substantiated by cases. Such development of fibroids after castration is probably rare, and due to some infrequent cause like this endarteritis obliterans. In the absence of a better explanation he is therefore inclined to accept this one.

THE EFFECT OF SUSPENSIO UTERI ON PREGNANCY AND LABOR.

Dr. Joseph Taber Johnston, of Washington, D.C., contends that very few, if any, such injurious effects need be feared as have been fre-

quently charged against the operation of suspensio uteri. That it sometimes fails to cure is true, but that is not the charge. In over one hundred suspensions done by himself, he only knows of two pregnancies. These were normal. In one case the labor was so rapid that the child was born before the doctor's arrival, and he knows from recent examinations that there has been no return of the retroversion. The other case he delivered in November last, after a five-hour normal labor, without chloroform or forceps.

He says the two principal objections made to the suspensio-uteri operations are its supposed effect upon pregnancy and parturition, and also that the suspensory ligament which finally holds the uterus in an approximately normal position, is liable to entangle the intestines in a fatal obstruction or inflammation.

Among the thousands of suspensio-uteri operations which have been successfully performed he has heard of only three such accidents and these may have been the result of imperfect or inexperienced work..

By ventral *suspension* he does not mean ventral *fixation*. He freely admits that the uterus should not be securely fixed into the abdominal wound, or to the abdominal wall in women likely to become pregnant.

TECHNIC OF PELVIC OPERATIONS BY VAGINAL SECTION.

Dr. J. Riddle Goffe, of New York, *Northwest Medicine*, January, 1905, gives a detailed description of the methods of operative procedure in vaginal pelvic surgery. With growing experience he concludes that "any pathologic condition that is confined to the true pelvis can be dealt with as satisfactorily, with as permanent results, and with far greater safety to the patient, through the vaginal than through the abdominal incision." He believes its successful application will lie with the man who practises the specialty of gynecology. The preoperative and post-operative treatment of vaginal cases by Goffe differs somewhat from the usual. He sterilizes the vagina by frequent 1-3000 bichloride douches and the day previous to the operation packs the vagina with 10 per cent. iodoform gauze, wrung out in a 1-5000 bichloride solution. This is removed by the operator and vagina douched with plain saline solution before beginning to cut. In acute pelvic inflammation Goffe uses the Fowler position, raising the head of the bed about 30 degrees so as to assist by gravity the flow of pelvic secretions.

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EDITORIAL.

THE MEDICINE OF THE GREEKS.

To the Ancient Greeks we owe much, and not the least of their gifts to us is what they did for medicine. The Greeks were not only originators, they were successful imitators and much of their systems of learning came to them from earlier periods and other countries. But they were not satisfied with merely borrowing from the Egyptians, Scythians, Phrygians, etc., but raised what they so obtained into a higher plane and added their own peculiar development. It may be said that no people has exercised such a controlling influence upon the culture of the world, and, through this, upon the history and development of medicine. The Greek mind always strove for the profound and the entire, and ever sought the essence of things. In the midst of this profound search after the essence of things, they did not neglect the outward phenomena and the appearances of natural conditions. They sought more to find out what disease was than to study any one disease or group of diseases.

The Greeks had a deep regard for medicine and the physician, whom they called "the Godequal, or Godlike philosopher," and spoke of the study of medicine as a true science, and its practice as a true art. As in other lines of Greek thought, so in medicine they traced its origin back to the ever-ruling gods and goddesses. This, of course, brought the true spirit of poetry into their study of medicine, and made them regard the physician and his work as worthy of true reverence. Hera was the protectress of lawful birth, Artemis was the goddess of parturition, Apollo sent pestilence, Pallas Athene was the special patroness of the eyes.

The real god of medicine was Aesculapius, the son of Coronis and Apollo. He was the "bearded son of a beardless sire." Apollo is said to have brought the pregnant Coronis to the funeral pile, and Aesculapius was saved by being taken from the mother's womb—a mythical case of Caesarean section. Another legend has it that his mother was the beautiful Arsinoe, that she abandoned him at his birth, and that he was reared by a goat. Among Aesculapius' children may be mentioned Hygeia, Machaon—"a good physician," Panacea, and Telesphorus—the bearer of convalescence. Aesculapius is said to have flourished about 1250 B.C. After his death, he was made the god of medicine, and was followed by a long list of priests. The teachings of Aesculapius and the

propagation of a knowledge of the healing art were due to the Asclepiadæ or lay disciples of Aesculapius. The physician was in high esteem among the Greeks in Homer's time, for we read in the *Iliad*—

“A wise physician, skilled our wounds to heal
Is more than armies to the public weal.”

There were also female physicians of high repute of whom he sang—

“She that all simples' healing virtues knew,
And every herb that drinks the morning dew.”

Among the ancient Greeks, the philosopher, the physicist, the metaphysician and the physician were all combined in the same person. When we reach the time of Hippocrates, tried observation and experience begin to assert themselves; and analysis and synthesis form the basis of the reasoning in medicine. Medicine in Hippocrates' hands becomes less a system of speculative philosophy, and more and more a system of natural science.

In the Ionic school, the Crotonic school, the Eleatic school, and the various schools of philosophy, the teachings of medicine underwent many changes. The Asclepiadæ and the gymnasts did much to keep alive the spirit of true medicine. They were mainly of the physical school and knew much less about internal medicine than surgery and the treatment of disease by means of exercise and bodily manipulations.

At the time of Hippocrates there were stationery and travelling physicians, and those who gave their time and attention to the army and the navy. Xenophon had eight surgeons with his famous ten thousand. There were also many midwives. The ancient Greeks, in their poetry, speak of the physician as—

“A seer, physician in our time of need,
With gentle hand the balm he poured around.”

The physician usually followed general practice, though there were such specialties as dentistry and diseases of the eye. The fees were, in most cases, in the form of an honorarium. They also dispensed and prepared their own medicines, mostly obtained from the vegetable kingdom.

The Greeks had but a limited knowledge of anatomy—such as was derived from the exposure of the viscera of various animals and the manipulation of the body. Their physiology was the humoralist theories of the east, which continued to dominate medicine till a comparatively recent period. A guiding principle among the Greeks—Hippocrates and his followers—was phenomena first, then judgment, then general propositions, then practical knowledge and craft. They lacked in experimental verification; and this was the fundamental weakness of Greek medicine.

THE ONTARIO MEDICAL LIBRARY ASSOCIATION.

The annual meeting of this Association was held a few days ago. The reports of the trustees, the treasurer, and the curator were of a very satisfactory character. There is some money in the general fund, the number of books is steadily increasing, and the property is paid off and some \$1,500 of balance in the building fund. There is much yet to be done, but what has been done so far has been well done.

CANADIAN MEDICAL ASSOCIATION.

Medical men who will attend the annual meeting of the Canadian Medical Association at Halifax, N.S., Aug. 22 to 25, are requested to communicate as soon as possible with C. Dickie Murray, M.B., chairman of the information and lodgings bureau, 66 Queen St., Halifax, with a view to securing hotel accommodation in advance. The hotel rates vary from \$1.50 to \$3.00 per day.

THE PREVENTION AND EARLY TREATMENT OF INSANITY.

The advances that are being made on the effects of fatigue, exhaustion, autointoxication, the effects of poisons, such as alcohol, tobacco, etc., and the toxins from the infectious diseases, have greatly widened our views upon the etiology and treatment of insanity. Much has been written of late years to show that insanity is a preventable disease in the majority of instances.

Every one is not born alike as to circumstances, wisdom, health, stability, of nervous system, or environments. The keen struggle for an existence may break down the nervous system of some, who, with easier circumstances, would have escaped becoming a neurasthenic, or a victim of fully developed insanity.

But many lack that forethought and care over their affairs, and as a consequence, do not make the most of their opportunities. Nor do they lay up anything for the future. These improvident and unsuccessful persons are always pretty close to the wall, and often suffer very severely from the fear of want or from the real thing itself. It is very difficult to see how much can be done towards the prevention of nervous break-downs in such cases.

Some come to this world with a poor supply of energy, especially nervous energy. The momentum they received at birth does not carry them far, and is soon lost through the frictions of life. If all goes well

with these people, they may escape nervous exhaustion; but if the cross winds of adversity and disappointment thwart their course, insanity may readily ensue.

Environment plays an important role in the causation of nervous trouble. It is well-known how much dementia paralytica depends upon the life lived by its victim. Irregular and dissipated habits are usually through bad example, though heredity may also figure in rendering the person an easy prey.

It would seem, therefore, that the foundations upon which nervous wreckage and insanity are built are wide, and admit of almost endless variations, combinations and possibilities.

In addition to the above causes of insanity, we have to consider two others. The effects of the toxins of the infectious diseases, and the results of autointoxication. Many of our leading alienists recognize the influence of acute infections in the etiology of insanity. But the poisons caused by infectious diseases are not the only poisons in the system capable of doing great damage to the sensitive nerve cells. Through over eating, or from food of an improper kind or insufficient in amount; or from the consumption of excessive quantities of alcohol, tobacco, or other narcotics, or because of an inert condition of the excretory organs, a state of systemic poisoning results and the nerve cells are made sick.

When all the above causes are carefully passed under review, it will at once appear that they belong to the class of causes known as preventable. Even when they are not foreseen and prevented, their consequences are often amenable to treatment. This is the modern view that is beginning to prevail, and it is being strongly urged that incipient insanity should be treated in suitable wards in general hospitals for a time. If this course was adopted, many cases that are now sent to the asylums for the insane, would recover and never reach the stage of commitment. This is no longer theory. It has been tried successfully in many places. The person with a sick nervous system is admitted to a hospital and properly treated, the result being that the balance of health is restored and reason once more asserts itself. The environments are corrected, worries are excluded, poisons are eliminated, nourishment is introduced, and the nerve cells rested. The person has not yet fallen over the precipice, he is not beyond hope. If not treated properly at this stage, the nervous system may suffer such damage that a cure is impossible, and a condition worse than death is the future of the sufferer. This is the plea of true humanitarianism, and the good old adage proves true that an ounce of prevention is worth more than a pound of cure. Of the thousands in our asylums, many were once in a condition permitting of successful treatment.

THE ONTARIO MEDICAL ASSOCIATION.

The recent meeting of this association was an excellent one, and lacked in nothing but in numbers. There are somewhere about 3,500 to 4,000 medical practitioners in the province of Ontario; and one would think that more than 200 of these would attend the annual meeting of the Ontario Medical Association.

For this there are a number of reasons. Among these might be mentioned the fact that many of the most active of Ontario practitioners, when they take a few days off from their own work, go to the larger centres, such as New York, Baltimore, or Chicago, where they think the opportunities for gaining knowledge is greater than in spending a few days in Toronto in attendance at the Ontario Medical Association.

Another reason may be found in the character of the programme. On this point it is very difficult to offer any criticisms. The committees entrusted with the task of arranging for papers have, we believe, always striven faithfully to make the meetings attractive and useful. If too many persons are brought from a distance, the local men complain that they do not get a fair chance; whereas, if the papers are all by our own men, then the members of the profession throughout the Province think the standard of the meeting may not be high from the scientific standpoint. A combination of papers from foreign and home sources seems to meet the conditions best and has been the one generally adopted.

But we think another reason for the small membership roll and attendance is that the proceedings are not got out in some form. It is true that most of the papers are published in the journals; but no member takes all the journals. We are of the opinion that in the end it would pay to have the papers and discussions printed in some book form, a copy of which would be furnished to every member who paid his fee for the year. This would be the means of inducing many to pay the annual fee, even if they did not find it convenient to attend. If this plan could once be adopted, we feel that it would add greatly to the strength and the usefulness of the association.

But the main reason for the smallness of these gatherings is to be found in the indifference in the minds of the great majority of medical men regarding medical societies. In the cities and counties where there are such societies, as a rule the attendance is much smaller than it ought to be. This is a mistake. Nothing will do a medical practitioner more good than to comingle with his fellow practitioners. Get away from the idea that every moment must be given to the interests of practice and patients. Bread study alone is bad, but bread practice alone is worse; and for the reasons that it lessens one's enjoyment, limits one's view of things, makes one narrow and illiberal, and, finally, even reduces his earning capacity, so that the bread aspect of one's life work suffers. The remedy for this state of things is to attend medical societies.

THE BANQUET TO DR. O'REILLY.

At the Albany Club, Toronto, on the evening of June 10th, there foregathered over one hundred doctors to do honor to Dr. O'Reilly, who has resigned his position of medical superintendent of the Toronto General Hospital after having held the position for thirty years.

Surrounded by so many friends consisting of members of the staff of the hospital, former house surgeons and physicians, and those who had received their clinical teaching in the Toronto General, Dr. Charles O'Reilly would not be human if he did not feel both a peculiar pride and a strange sadness. And Dr. O'Reilly is human.

Dr. O'Reilly has been an admirable medical superintendent throughout all these many years. Of this the feeling of those present at the banquet gave ample proof. No one pretends to say that Dr. O'Reilly has made no mistakes—he would not wish any one to say this. For the greatest men make mistakes, the true test of wisdom being not that one makes no mistakes, but that he sees them quickly and at once corrects them. In this regard Dr. O'Reilly has been particularly courageous and manly, and ever carried with him the confidence of all with whom he came in contact.

The gathering was a particularly happy one. Through it all there ran the feeling to forgive and to forget anything that is faulty, and to remember all that is good. It was because of this feeling that there was so much to remember in all that was said and in the many reminiscences that were told during the evening. For by all present the guest of the occasion was crowned a true disciple of Aesculapius—*inter homines sapiens, intersapientes medicus*.

Dr. O'Reilly's work during these thirty years in the Toronto General Hospital was a truly great work. What he did for the patients and students in the institution can never be written. It is a memory, but a memory of that kind which

"Time but the impressions deeper makes
As streams their channels deeper wear."

If a man can make friends and hold them for so many years, if his differences only cement these friendships, and if at the end of it all the praises are loud and the fault findings unheard, then the proof is conclusive that the gold is of the sterling standard.

For Dr. O'Reilly we wish many happy years. We do not speak of his retirement; he is too energetic for that. We not only wish for him many happy years, but for himself and the community many useful ones also. His sun is still high, and has scarcely yet begun its westward course. As it once did of old, may it stand still in the heavens: not for a brief space, but for many years; and thus project the evening of his life far into the future, in character like the radiant tints of a golden sunset. Such is the wish of his many friends.

REPORT ON HOSPITALS, REFUGES AND ORPHANAGES.

The thirty-fifth annual report on the above institutions is just to hand. There are now 61 hospitals, 35 refuges, 32 orphanages, 2 homes for incurables, and 2 magdalene asylums. The total number of patients in all the hospitals was 39,223, there were 2,241 deaths, or a percentage of .5½. The government grant was \$110,000, the amount received from other sources was \$738,881.69, and the subscriptions, donations, etc., were \$123,858.80; being over \$28,000 less than the previous year. The total expenditures were \$852,240.51, or 89 cents per day. The government grant is 17 per day to the patients entitled to it.

The report speaks, at some length, regarding tubercular cases. It condemns the custom of placing these cases in hospitals along with other patients, as this is not good for the consumptive nor the other patients. It would be better if the hospitals provided special tents for these cases. The report urges the establishment of municipal sanatoria for consumptives. If the municipalities would only show a little generosity to the hospitals in their vicinity and make them a substantial grant, these hospitals would be able to furnish the medical accommodation, and without the multiplication of institutions, which always means extra expense.

The report goes on to criticize adversely the hospital accommodation in Toronto. This is scarcely justified. The Toronto General Hospital has a beautiful site, and many recent buildings well adapted for hospital work. The older portion could be remodelled. That portion of the city requires a hospital. No one has ever called in question the wards or arrangements of St. Michael's. Indeed, it would impress an unbiased visitor as a very fine hospital. Grace Hospital is a modern and well constructed building. Its only drawback is lack of ground. As far as its hospital accommodation is concerned, the person would be hypercritical who could find fault with it. The Western Hospital is young yet. It has a splendid site of four acres, and is now beginning to put up new buildings. Its strength is the fact that it is not encumbered with out-of-date buildings. The first of its many new buildings is now finished, and will challenge the severest criticism. The Children's Hospital, The Orthopedic Hospital, St. John's Hospital for Women, and the Home for Incurables, we always thought, were a credit to the city. Whence then this bitter attack on the Toronto hospitals as shown by the words of the report, "I do not wish to be unduly severe in my criticisms, but I would be remiss in the discharge of duty if I refrained from calling attention to conditions which should not be allowed to prevail?" This is followed by a recommendation for a new central hospital.

We would again take the liberty of saying that the hospitals throughout the province should receive more liberal treatment from the govern-

ment. The Government grant is down to 17 cents a day to those entitled to it. In most cases the municipalities pay for a pauper case 40 cents a day, and in a few places 50 cents a day. This is not enough. The hospitals would have to close their doors were it not for the slight margin made on the private ward patients. It is hardly fair to criticize too harshly the hospitals for not having everything as nice as might be desired. These institutions are doing a very great service for the province, and should receive more assistance and less criticism.

In the early part of April, an influential deputation waited on the Government and asked for a larger grant. So far nothing has come of it. Just take one instance. The Government made a grant of \$15,000 to the National Sanatorium Association for the Treatment of Tuberculosis. But the hospitals of the province are now treating hundreds of consumptives; but could secure no increase in the grant, which is now altogether too small. Here is a question that touches the very life of the people, and yet there was no money for it. The grant remains stationary at \$110,000, though the number of claimants upon it is steadily increasing.

PERSONAL AND NEWS ITEMS.

Dr. A. T. Rice, who has been in practice in Woodstock since 1884, has removed to New Dundee, between Galt and Berlin.

Dr. G. Sterling Ryerson, accompanied by his son, Eric Egerton, have been in England for a couple of months.

Dr. Gunne, who has practised for many years at Dauphin, Man., has removed to Rat Portage.

Dr. J. T. Duncan and Mrs. Duncan are enjoying a three months' trip in Europe.

Dr. and Mrs. H. P. H. Galloway, of Toronto, are having an extended trip through the Eastern States.

Dr. Hotham, formerly of St. Marys, Ont., has entered into partnership with Dr. Argue, of Winnipeg.

Dr. Freeman, Medical Superintendent of the Hamilton City Hospital, has resigned.

Dr. and Mrs. Hay, of Wallaceburg, are spending a few months in Europe.

Dr. Duncan N. Maclellan, of Toronto, was married, June 14, to Miss Marion Clemesha, daughter of Dr. Clemesha, of Port Hope.

In Hamilton on June 4, Miss Jean Leslie, daughter of Dr. James Leslie, 69 Main Street west, was married to Dr. R. R. Wallace.

The International Medical Congress will meet in Lisbon, 19-26 April, 1906.

Dr. James Henderson, M.D., C.M., of Warren, Ont., has opened an office in Fort William.

Dr. Morrow, of Arthur, has been appointed a coroner for the County of Wellington.

Dr. Stewart, of Fort William, was married to Miss Eva Petitt, of Glencoe. The doctor will locate in Fort William.

The American Association of Surgeons held their meeting this year in Montreal at the Windsor Hotel on June 13th.

Dr. R. A. Pyne, Minister of Education; Dr. J. A. Temple, and Dr. L. F. Barker had the degree of LL.D., honoris causa, conferred on them by the University of Toronto.

The many friends of Dr. L. F. Barker will be delighted to learn that he has been appointed physician-in-chief at Johns Hopkins, the position recently vacated by Dr. Osler.

The University of Toronto graduated this year 157 persons in medicine. Truly Aesculapius should feel proud. Little did he think he was establishing so popular a calling.

Dr. Sprague, Stirling, Ont., author of *Medical Ethics*, was in the city, acting as examiner in medicine for the Medical Council of the College of Physicians and Surgeons.

Dr. William Clark, one of this year's graduating class from Manitoba College, has been appointed medical superintendent of St. Boniface Hospital, in succession to Dr. Turnbull.

Dr. A. H. Singleton, of Newboro, has returned from Edinburgh, Scotland, where he spent two months in post-graduate work. He was also in London, England, for the same length of time.

St. Michael's Hospital, Toronto, is arranging to erect a new \$50,000 wing to the present building. This makes the hospital a large one, with accommodation for over 200 patients.

Dr. Beeman, of Mallorytown, started for Montreal recently. He will be absent for two or three months. Dr. Judson, of Lyn, will attend to his practice during his absence.

Dr. W. Turnbull, who has been, during the past year, medical superintendent of St. Boniface Hospital, has decided to practice his profession in Winnipeg.

The marriage took place, 5th June, at Birtle, Man., of Miss Fannie Doyle to Dr. P. P. Ballachey, of Brantford. The bride is well known in that city.

Dr. Graham Chambers, of Toronto, has retired from general practice and will, in future, devote himself to internal medicine and diseases of the skin.

Dr. D. J. Dunn, after a successful professional career of twelve years in Beeton, has disposed of his practice to Dr. J. C. Hodgson, formerly of Beaverton, but for some time past engaged in post-graduate work in the United States.

Dr. F. H. Shanks intends taking up his permanent residence in Victoria, B.C. For some years past he has been in charge of the hospital service on the Fiji Islands. He has been over a quarter of a century connected with the British service in India, Egypt, and elsewhere.

Some months ago, while performing a surgical operation, Dr. J. D. Gauthier, wounded himself seriously in the left eye. After a few days had elapsed blood poisoning set in and the removal of the eye was decided upon, and the operation took place at Notre Dame Hospital, Montreal.

The Hamilton doctors held a meeting June 7th, and passed a resolution that it would be in the interests of the hospital to have a competent medical man in charge. The salary to be not less than \$2,000 a year to start with.

A very pretty wedding took place, 6th June, in Knox Church, South London, when Miss Maude Amelia Somerville, eldest daughter of Mr. G. A. Somerville, was married to Dr. Norman B. Alexander, of that city.

A very pretty wedding was solemnized at St. Paul's Church, Dunnville, on 9th June, when Mr. Joseph Morley Jory, M.D., of St. Catharines, was married to Alice Mary, second daughter of the late Mr. Edward Docker.

A pretty and fashionable wedding took place 1st June, in St. Margaret's Church, Spadina Avenue, Toronto, when Miss Minnie Darling, only daughter of Mr. and Mrs. Richard Darling, was married to Dr. Thomas Herbert Bell, L. R. C. P., only son of Mr. F. J. Bell, of Peterborough.

Dr. Charles Grange McGreer arrived home at Napanee the 2nd of May, after an absence of a year and a half in Edinburgh, Glasgow and London. The doctor secured diplomas in all these places, where he spent the time in the pursuit of his medical profession. About July 1st he leaves for Winnipeg, where he intends practising his profession.

In connection with the excellent work that is being done at the London School of Tropical Medicine, it is of interest to note that Canada is well represented. Dr. Hamilton Wright of McGill, whose name is already widely known in connection with his studies on Beri Beri, is continuing his investigations there, and another Canadian, Dr. A. T. Stanton, of Toronto, is Sir Patrick Manson's senior house physician.

A. H. Rondeau, M.D., C.M., one of the successful candidates at the recent final examinations in medicine, has been appointed house surgeon at the Winnipeg General Hospital. Dr. Rondeau passed his examination

with honors, and his appointment is giving himself and his friends much satisfaction. Others who have also been appointed are Doctors Harry Murdoff, H. W. McGill and B. A. Hopkins. Dr. S. J. Pierce and Dr. Brown at present on the staff, have decided to remain for the coming year.

Dr. O'Reilly said no harder task was known to man than to say good-bye to those whom you think will miss you, and he hoped they would realize the effort and excuse him from even trying to say what his heart felt. He appreciated their kind motives, their farewell address, and the more than handsome, useful and substantial souvenir given to him by the united kindness of nearly 200 of "his own household." He only hoped that their friendship would last as long as the desk, for that meant forever, and he would assure them that it would be handed down in the O'Reilly family as an heirloom to—he was almost going to say—unborn generations. He wished them with heartfelt regrets a long good-bye.

Dr. Hamill, who conducts the Canadian Medical Exchange for the purchase and transfer of medical practices and properties between medical men, wishes us to state that at no time during the past ten years has he been in a position to so fully meet the wants of all needing practice as at the present time, as he has over 30 medical practices for sale in all parts of Ontario and the Northwest Provinces, all of which are most inviting opportunities to secure a lucrative practice at most inviting prices and terms. Physicians desiring a practice can secure what they desire better by applying to Dr. Hamill than by all other methods combined that they could adopt. See his offers among our advertising pages.

All the officials, nurses and employes of the General Hospital, numbering nearly 200, assembled in the theatre and presented an address and a handsome table desk and arm chair, made of quarter-cut golden oak, to Dr. C. O'Reilly, who is retiring from his long official life the end of June, when he and his family sail for England. Mr. Miller, secretary, spoke in the most complimentary terms of Dr. O'Reilly, his life-long work, and of the success of the hospital, under his direct personal management. Mr. Brown, the steward, read the address on behalf of the employes, nurses and officials, and Miss Snively presented Dr. O'Reilly with the keys of the desk, which they all hoped he would use for many a long year. They also hoped that it would remind him of the many sincere friends he was leaving in the hospital, and assured him that they would long remember him as a trusted chief and kind master.

The attention of the Woman's National Sabbath Alliance having been called to the harmful effect of overtaxing brain and nerves, resulting from incessant excitement and toil, appeals to the medical faculty for a leaflet of not more than 2,500 words, demonstrating the urgent need of a weekly

mental and physical rest-day as appointed of God, for the moral and religious welfare of man, and offers a prize of \$25.00 for the best essay on this subject. The experience of a Christian physician preferred. Manuscripts with the name and address of the writers in a sealed envelope will be received until the first of November next, at the headquarters of The Alliance, room 709,, 156 Fifth Avenue, New York City. The accepted manuscript shall become the property of the Allliance, and the others will be returned when called for or accompanied by the full amount of postage needed.

OBITUARY.

JAMES THORBURN, M.D.

Dr. James Thorburn, for years recognized as one of the first physicians of Toronto, died at the family residence, 418 Bloor Street west. Heart trouble was the immediate cause of death. His illness was brief lasting only a few days, though the affection had been serious with him for some time. All the members of the family were at the bedside. The end came peacefully. The interment took place at Mount Pleasant Cemetery, and was very largely attended.

James Thorburn was born at Queenston, Ont., November 21st, 1830, and was, therefore, in his 75th year. He was the son of the late D. Thorburn M.P., for Lincoln County in the old Parliament of Upper Canada. He was prepared for college by Dr. Russell of Stamford, and took his medical course in the Toronto Medical School, and after graduation prosecuted studies at Edinburgh University from which he received a degree in 1855.

Dr. Thorburn entered upon his practice in Toronto at once, and for some years was professor of pharmacology and therapeutics on the medical faculty of his alma mater. He was also on the staff of the Toronto General Hospital and physician to the Upper Canada College. Dr. Thorburn was surgeon to the Queen's Own, and in that capacity accompanied the regiment to Ridgeway in 1866. The esteem in which he was held by the profession was shown in his election to the presidency of the Canadian Medical Association, 1895, and the presidency of the Ontario Medical Council in 1897. He was for years an examiner of the College of Physicians and Surgeons. He was a medical director of the North American Life, and was the first surgeon to the Grand Trunk Railway.

Dr. Thorburn married Miss Jane, daughter of Donald McTavish, of Grafton, Ont. Their family consists of one son and two daughters, Dr. James D. Thorburn, of Toronto; Mrs. Dr. Diordan, and Miss Thorburn, at home.

A. E. HARVEY, M. D.

Widespread regret was felt in Sarnia and throughout the County of Lambton over the sudden death of Dr. A. E. Harvey, of Wyoming, which occurred at his home at an early hour on 27th May.

The day before, about two o'clock, while the doctor was walking in his garden, he was stricken with paralysis, and remained unconscious until his death.

Deceased was one of the oldest practising physicians in the County of Lambton, and was well known everywhere within its borders. His brusque manner covered a kindly, generous disposition, and those who knew him best admired his many admirable qualities. Dr. Harvey was in the 64th year of his age, and had been a resident of Wyoming for about 37 years.

The funeral was held at 2 p.m. on Tuesday, May 30th, and was under the auspices of Burns Lodge, A. F. & A. M., Wyoming, and Bruce Chapter, Royal Arch Masons, of Petrolea, of which bodies deceased was a valued member.

BOOK REVIEWS.

THE DOCTOR'S WINDOW.

Poems by the Doctor, for the Doctor, and about the Doctor. Edited by Ina Russelle Warren, with an Introduction by William Pepper, M.D., LL.D. The Saalfield Publishing Co., Akron, O., 1904. Price, \$2.50.

This volume belongs to the Doctor's Recreation Series. The poems are of the most varied character and from the pens of 115 authors. There are none that lack merit and many possess very high merit. Many of these poems are old friends; and it is a real treat to meet them all gathered together and bound up in such close fellowship. Among the treats that await the reader might be mentioned "The Morning Visit" by Holmes; "The Country Doctor" by Carlton; "Minerva Medica" by Weir Mitchell; "The General Practitioner" by Johnston, etc. This volume may be recommended to the doctor with great confidence. Many an hour can be agreeably spent over its pages. In these poems there is many a side light thrown upon the doctor; and in the language of Dr. Pepper in the preface, "It is good to find that the role assigned him in the unfolding scroll of time is one of ever growing honor and importance."

TUMORS OF THE CEREBELLUM.

By Charles K. Mills, M.D., Charles H. Frazier, M.D., George E. DeSchweinitz, M.D., T. H. Weisenburg, M.D., and Edward Lodholz, M.D. Reprinted from the *New York Medical Journal* and *Philadelphia Medical Journal* for February 11 and 18, 1905. New York: A. R. Elliott Publishing Company, 66 West Broadway, 1905.

This little volume is the collection of six papers on the diagnosis, surgical aspects, ocular symptoms, and pathology of cerebellar tumors. These pages contain a good deal of very useful information upon a rather neglected subject. These articles are well worthy of a careful perusal.

LARYNGEAL PHTHISIS.

By Richard Lake, F.R.C.S., Eng. Second edition, enlarged and rewritten by Harold Barwell, M.B., F.R.C.S., Laryngologist, Mount Vernon Hospital for Consumption; Assistant Surgeon, Metropolitan Ear, Nose and Throat Hospital, etc., etc. With 45 illustrations, 20 of which are colored. London: Baillière, Tindall and Cox, 8 Henrietta St., Covent Garden, 1905. Price, 6s. 6d. net.

This is really a beautiful book. It is not large, but it is good. In matter and form it would be difficult to see in what way it could be improved. The illustrations plain and colored are excellent both from the artistic and utilitarian standpoints. The authors go into treatment with much care and are moderately optimistic as to the results of careful treatment. Pathology, etiology and diagnosis are stated in a precise and clear manner. This little book will not disappoint its readers. The hope of the editor of this edition is that the book may lead to an earlier recognition and more hopeful prognosis of tubercular laryngitis.

DISEASES OF THE RECTUM AND ANUS.

By D. H. Goodsall, F.R.C.S., Eng., Senior Surgeon to the Metropolitan Hospital; late Senior Surgeon to St. Mark's Hospital for Fistul and other Diseases of the Rectum; and W. Ernest Miles, F.R.C.S., Eng., Surgeon to the Gordon Hospital for Diseases of the Rectum; Surgeon to the Cancer Hospital, Brompton, etc., etc., London. New York and Bombay. Longmans, Green & Company. Price 6s net; 1905.

One of the tendencies of the age is to produce special books by specialists. The authors in this case have had ample opportunities for observation and experience, and have made good use of them. The book is certainly an attractive one, being printed and bound in the very best form. This volume is part II. of the author's work and contains chapters on Prolapse of the Rectum, Invagination of the Rectum, Ulceration, Stricture, Malignant Disease, Benign Tumors, Foreign Bodies, Pruritus, and Syphilis. After a careful perusal of the book, we can speak in the highest terms of its merits, and can confidently recommend it.

PRACTICAL PHYSIOLOGY.

Part ii. of Exercises and Demonstrations in Chemical and Physical Physiology. by Augustus D. Walker, M.D., F.R.S., and W. Legge Symes. Longmans, Green, and Co., 39 Paternoster Row, London; and New York and Bombay; 1905. Price, 2s. 6d. net.

This is a first class little book by two very competent authors. The work deals with the examination of blood, bile, urine, milk, saliva, breathed air, etc., etc. It is well written, terse and very fully illustrated. It is just the sort of book that the students should have. Many physicians would also find it extremely interesting.

STIMSON ON FRACTURES AND DISLOCATIONS.

A Treatise on Fractures and Dislocations. For Students and Practitioners. By Lewis A. Stimson, B.A., M.D., LL.D., Professor of Surgery in Cornell University Medical College, New York; Surgeon to the New York and Hudson Street Hospitals, etc. New (4th) edition, thoroughly revised. Octavo, 844 pages, 331 engravings and 46 full-page plates. Cloth, \$5.00, net; leather, \$6.00, net; half morocco, \$6.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

Since the publication of the third edition many interesting details, some of much practical importance, have been added to the knowledge of certain forms of fracture, particularly in or near joints. The x-rays have been used so freely that a greater degree of confidence may be placed in the accuracy of diagnosis than was formerly possible. In fact, sufficient details have been obtained in some of the rarer forms of injury to permit systematic descriptions. Much new material of great importance will also be found regarding the operative reduction of old dislocations.

The frequency and severity of the injuries treated in this volume, the necessity for prompt attention, and, finally, their medico-legal possibilities, all unite to render Dr. Stimson's authoritative work essential to general practitioners as well as surgeons. It covers every known form of these lesions, not a few of which were first described in its pages. The author's vast experience and sound judgment are reflected in a literary style of exceptional clearness, and his pages abound in telling engravings and plates. He has endeavored to adapt his work specifically to the needs of the practitioner, particularly in the sections on diagnosis and treatment. In this new and thoroughly revised edition the profession have at command the leading authority upon both subjects in their latest development.

FINDLEY'S GYNECOLOGICAL DIAGNOSIS.

A Treatise on the Diagnosis of Diseases of Women. For Students and Practitioners. By Palmer Findley, B.S., M.D., Assistant Professor of Obstetrics and Gynecology, Rush Medical College in affiliation with the University of Chicago; Assistant Attending Gynecologist to the Presbyterian Hospital, Chicago. In one octavo volume of 588 pages, illustrated with 222 engravings in the text and 59 plates in colors and monochrome. Cloth, \$4.75, net; leather, \$5.75, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

In no department of medicine are cases more numerous, important and oftentimes obscure than in gynecology, but fortunately there is no class of diseases more open to positive and clear diagnosis by modern methods. Until the appearance of Dr. Findley's work there was no book in English which covered the subject.

The importance of the subject is evident, as correct diagnosis leads directly to successful treatment. In its first edition this excellent work was promptly accepted as the authority. Dr. Findley covers the subject fully and practically, and bearing in mind the needs of both students and practitioners explains the most modern views and methods simply and will careful details, using black and colored illustrations freely. The first edition of this work has already been exhausted, and the author has utilized the opportunity to revise the volume thoroughly, bringing it in every part well up to date. An addition of nearly 100 pages of text, 12 engravings and 14 colored plates has been necessary to present the important growth of the subject during the short interval since its first edition. The new matter on Blood Examination, Differential Diagnosis, Bacteriological Examinations, etc., much enhances the value of one of the most helpful books ever offered to the medical public.

GRAY'S ANATOMY.

Messrs. Lea Brothers & Co. have pleasure in announcing a new edition of Gray's Anatomy, to be published about midsummer, and embodying nearly two years of labor on the part of the editor, J. Chalmers Da-Costa, M.D., of Philadelphia, and a corps of special assistants.

Commensurately with the importance of the largest selling medical work ever published, this new edition will present a revision so thorough and searching that the entire book has been reset in new type. In addition to the changes necessary to bring it abreast of the most modern knowledge of its subject, several important alterations have been made with the view of adapting it still more closely to present-day teaching methods, and in fact to anticipate the trend of anatomical work and study.

Thus, while the older nomenclature is used, the new names (B.N.A.) follow in brackets; the section on Embryology and Histology at the back of the present "Gray" has been distributed throughout the new edition in the shape of embryological, histological and biological references and paragraphs bearing directly on the part under consideration, thus contributing to a better and easier understanding.

The illustrations have come in for their full share of the general revision, so that at this writing more than 400 new and elaborate engravings in black and colors have been prepared. "Gray" has always been noted for its richness of illustration, but the new edition far exceeds anything that has hitherto been attempted.

No medical text-book has ever approached "Gray" in sturdy longevity and accumulating strength. Notwithstanding the many would-be competitors which during nearly fifty years have periodically appeared and endeavored to share its ever-increasing popularity, this wonderful creation of a genius who lived barely long enough to realize that his work was done—how well he never knew—goes on and on, each succeeding year bringing new friends and strengthening the fealty of the old.

The editor and publishers have spared neither labor nor expense to keep "Gray" at the forefront of anatomical knowledge, and there seems to be no reason to doubt that its next fifty years will pass as smoothly and as successfully as have those past.

MISCELLANEOUS.

WORDS OF APPRECIATION.

The following letter, relating to the treatment of opium and other addictions, will interest many. It is addressed to our old friends, The Antikamnia Chemical Company, and reads:

"*Gentlemen.*—Illness, dating from the very day of my former letter must be my plea for my silence and my seeming indifference to your courtesy, and your exceptional kindness in sending me your little 'Vest-Pocket-Box.' I want you to feel that I sincerely appreciate your goodness in this little matter. I am in charge of the Woolley Sanatorium, an institution conducted exclusively for the cure of opium and other drug addictions, and am using Antikamnia Tablets extensively after withdrawing morphia, and I am free to say that I do, in reality, regard your product as 'A Succedaneum for Morphia.'

"Our institution is probably the largest of its kind in the South, and if my views should prove of value to you at any time, command me, and use them as you wish."

MARION T. DAVIS, M.D.,

(University of Maryland School of Medicine.)

Atlanta, Ga., April, 15, 1905.

BRIEF CLINICAL REPORTS ON IMPOVERISHED BLOOD.

Probably the most frequent and important conditions which the average physician is called upon to treat, are of an impoverished blood supply. Blood impoverishment is a condition rather than a disease and may be met with in all walks of life and at any age. It is symptomatic as many disease, and cases are observed where it seems to be the chief clinical symptom where no well defined organic disease can be observed but where many indefinite complaints due to blood impoverishment are plainly in evidence. Whatever concomitant conditions exist with anemia and regardless of whatever special treatment may be demanded by plainly existing established organic trouble, it is, nevertheless, a fact, that the most complete and rapid cures are by restoring to the blood its normal elements. Consequently, the physician is justified in treating all cases of anemia with regard to the anemia itself, but at the same time, not over-looking the care of the other pathological conditions which may exist.

A large hospital experience has given me ample opportunity to study these blood conditions and compare the action of the many therapeutic agents employed in the treatment of blood impoverishment. My efforts have been constantly directed toward finding the remedy which will have the most complete and rapid results in restoring the red blood corpuscles, thereby affording the surest and quickest relief from the weakness and general debility which always accompanies blood impoverishment.

In the beginning of my experiments I noted that those therapeutic elements containing a food produce and a stimulating vehicle have shown the most satisfactory and prompt results while those purely of a drug basis seemed to have a limited usefulness. The conclusion reached by my experiments extending over several years, leads me to unhesitatingly endorse Bovinine as being the best tonic, stimulant and food. Dr. John Griggs, Farmington, Conn.

THE USES OF ERGOAPIOL.

Ergoapiol (Smith) may be implicitly relied upon to promptly relieve the most intractable forms of amenorrhea, dysmenorrhea, menorrhagia, metrorrhagia, or, in fact, any disturbance of the menstrual function arising from a disordered condition of the organs of regeneration. It is an emmenagogue of incomparable excellence.

Preceding and succeeding the final cessation of ovulation and menstruation, physical and psychical disturbances of a more or less serious

character are frequently observed. Ergoapiol (Smith) because of its tonic effect upon the female generative system and its splendid antispasmodic influences, is of unsurpassed value in the treatment of the various disturbances incident to this period.

CARBUNCLES.

Creel has relied on ecthol given internally, in doses of a teaspoonful, in cases of carbuncles, flax seed poultices applied locally, emptying of pus, scrapping out of dead tissue and cleansing with peroxide of hydrogen after this a topic application of ecthol on absorbent cotton every four to eight hours. The average duration of this treatment in his cases was ten days.—*Journal of The American Medical Association*.

A REVIEW OF THE REPORT OF THE ANÆMIA COMMISSION UPON HOOKWRM DISEASE IN PORTO RICO.

The report of the Commission appointed by the United States Government, in February, 1904, for the *Study and Treatment of Anæmia in Porto Rico*, has been submitted to the governor of that island. This report covers over 200 pages, and is printed both in the Spanish and in the English language.

The Commission was composed of experts in their special field, and the amount of work accomplished by these gentlemen, and the exceedingly painstaking manner in which they attended to every detail of the subject, stamps this enquiry as one of the most scientific and thorough investigations ever undertaken in the cause of public health.

As early as 1899, Dr. Bailey K. Ashford, who later became a member of this Commission, discovered the parasite *ankylostoma* in the feces of anæmic patients who were then crowding the field hospitals of Ponce. This was the first positive evidence that the disease in Porto Rico known as *anæmia*, was not the ordinary form, but *ankylostomiasis* or *uncinariasis*, produced by the parasite sucking the blood, and so prevalent did this disease become during the ensuing years that fully ninety per cent of the population became affected.

When the Commission appointed by the Government of the United States began its investigation in Porto Rico, it established a hospital consisting of tent-wards, first at Bayamon, and later at Utuado, the most anæmic districts of the island. The object of the treatment was first to remove the parasite and then to cure the anæmia.

To kill the parasite, thymol, malefern, and betanaphthol were given but the preference was for thymol. First the patient received a purge of salts, and then on the following day he was made to fast until one o'clock

and then was given thymol in doses not exceeding four grammes; then another purge was given to remove the bodies of the parasite killed with the antiseptic. The purpose of the first purge was to clear the intestines of mucus, etc., so as to allow the thymol to act. The thymol and purge treatment was continued once a week until the feces showed no more *uncinaria*.

While thymol kills the parasite and the purges remove them from the intestines, also diminishing the amount of toxins in the system, these remedies only clear the field for a reconstructive process in the blood which is needful to restore the extremely anæmic patient to health.

Iron was given in the severe cases of anaemia. *Pepto-Mangan (Gudo)* was the only proprietary remedy reported by the Commission, the other remedies used being pharmacopoeial preparations. That over eighteen pages of the report should be devoted to cases treated with Pepto-Mangan, proves the high regard in which the Commission held this preparation, and establishes the unrivaled clinical value of Pepto-Mangan (Gudo), in one of the severest forms of anæmia—that of *uncinariasis*, or miner's anæmia.

In reading the Report of the Commission, the unbiased character of the work stands out clearly, and yet the result obtained point so distinctly to the supremacy of Pepto-Mangan (Gudo), that even if numerous other records were not available, proving the therapeutic value of this remedy, this report alone would suffice to establish Pepto-Mangan at once as the foremost hæmatinic known. The eighteen cases in which the Commission used Pepto-Mangan (Gudo) in the treatment of *uncinariasis*, were selected on account of their extreme severity, and thus these cases represent the most crucial test to which any iron preparation can be subjected. The results obtained with this treatment were extremely gratifying. In nearly all of the cases we find such notes as these, "Excellent condition. Completely cured, etc.," while the difference between the low count of the red cells and the low percentage of hæmoglobin (some cases showing only 11 per cent.) at the beginning of treatment with Pepto-Mangan, and the nearly normal findings at the conclusion, affords convincing proof of the efficacy of the medication.

A noteworthy fact is that none of the patients showed any digestive disturbance after the administration of Pepto-Mangan, although the remedy was used for many weeks in each case. When we remember the extremely low state in which most of these patients were found on admission, and the fact that several suffered from gastro-intestinal symptoms incident to their disease, this detail is by no means to be underestimated.

The observations of the Commission were made under Government control, and therefore the Report may be regarded as a supreme test, and the efficacy of Pepto-Mangan in one of the most severe forms of anæmia is proved beyond a doubt.

CAT.

THE LATE T. G. JOHNSTON, M.D., M.P.
SARNIA.

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SIMPLE ULCERATION OF THE STOMACH AND DUODENUM.*

By FREDERICK W. MARLOW, F. R. C. S., Eng., Toronto, Ontario.
(Assistant Surgeon, St. Michael's Hospital; Surgical Registrar, Toronto General Hospital; Assistant Demonstrator of Anatomy, Toronto University.)

WHEN asked some time ago to suggest a suitable subject for discussion at this meeting of the Ontario Medical Association, one ventured, after due consideration, to bring forward that of simple ulceration of the stomach and duodenum as a most deserving one, and especially so in view of the recent, rapid advances made in the treatment of this disease.

It was with pleasure that one learned some few weeks ago that our distinguished visitor, Dr. Ochsner of Chicago, was to discuss the surgery of the stomach from the clinician's standpoint, because one felt that the subject one had suggested would receive the attention which it so properly deserved, considering that recent advances in gastric surgery have for their basis, to a very great extent, the encouraging results of treatment of gastric and duodenal ulcers by surgical procedures as carried out by such men as Miculicz, Robson, Moynihan, Mayo, Finney, and by others, including our visitor.

In a review of the more recent literature on this important subject, one is at once impressed by its enormity, and after that by the impossibility of abstracting therefrom the subject matter for a fifteen minutes' paper without passing over a vast amount of important and useful data. One would require months, and even years, to put together in a manner fit for presentation at a meeting of this association the various statistics that one observes on the various phases of the subject in question, and especially so on account of the great variability of such statistics, whether clinical or post-mortem, and coming as they do from various hospitals scattered over Europe and America, in which the number of such patients has been relatively small, and this no doubt on account of the fact that gastric or duodenal ulceration is largely a home disease rather than a frequently occurring one in hospital practice.

One's first intention was to devote most of the allotted time to a consideration of the surgical treatment, but in view of Dr. Ochsner's contri-

*Read at the meeting of the Ontario Medical Association, 7th June, 1905.

bution, one has chosen only to put together a few impressions gained from a present day general review of the subject.

There is no longer the necessity for giving distinct, separate consideration to ulceration of the duodenum, which occurs much more frequently than hitherto supposed, as apart from that of the stomach, for since it is that portion of the duodenum above the common entrance of the bile and pancreatic ducts which is involved by the great majority of duodenal ulcers, and as the two conditions are so frequently associated in the same individual, they have come to be looked upon as essentially similar in nature.

The present average estimate of the relative incidence of this disease is about five per cent. Post-mortem records have shown a much greater frequency than have clinical, and it is safe to presume that if careful records of the cases that do not find their way into hospital were available there would be a noticeable increase in the estimate. Greater frequency has been reported from England and Germany than from various parts of America, and even in the latter country vast differences exist in such reports. Whether these are real or only apparent is not manifest when consideration is had for diagnostic care and ability, the frequency with which exhaustive post-mortem examinations are made, and other circumstances which determine the precise value of hospital records.

Recent observations tend to show only a slight preponderance of the disease in females, and that it is only in the acute form of gastric ulceration that such preponderance is decidedly established, since chronic gastric ulceration is probably and duodenal ulceration is certainly more common in males. The majority of cases occur in the poorer classes whose food is not always as wholesome as it ought to be, though the well-to-do are by no means exempt; and in females the disease has been especially common amongst servants.

The vast majority of cases occur between the ages of fifteen and forty-five. From twenty to thirty is the commonest age in females, and from thirty to forty in males. The disease is comparatively rare after forty-five but is more common before fifteen than is usually believed, Dr. Cutler (1) of Boston, having collected records of some twenty-nine cases of gastric ulcer occurring in children between the ages of thirty hours and fourteen years, whereas Oppenheimer, quoted by Moynihan, (2) collected records of fifteen cases of melaena neonatorum arising from duodenal ulceration.

The true pathogenesis of this disease is still overshadowed by obscurity. Apparently all are agreed that the loss of substance is the direct result of digestive processes acting upon body tissues, the vitality of which has previously been impaired or even lost owing to some cause, the precise nature of which is still undecided. The chief causative theories already advanced may be classified as vascular, nervous and muscular,

secretory, traumatic, and bacterial. Of vascular causes most stress has been placed upon embolism, other suggested possible conditions being, thrombosis, hæmorrhagic infiltration, arterio-sclerosis, aneurysmal dilatation, varix and arterial spasm. Nervous and muscular causes are accorded to impairment of nervous control, acting either through the nervous centres or through the nerves distributed to the affected part, or to irritation of nerve terminals and consequent reflex and localized muscular spasm. The hypersecretion of hydrochloric acid has been regarded by many as causative but is now generally looked upon as a coincidence or an effect. As the result of recent experiments Weinland, referred to by Dr. MacCallum (3) of Baltimore, has suggested the possibility and even the probability of the existence or the creation within the body cells, which are or may be exposed to the action of the digestive juices, of an anti-zymogen of a protective character. Were this the case inevitable destruction would await any such exposed part which might become deprived of its inherent immunity. Traumatism resulting from the ingestion of fish bones, other foreign bodies, coarse pieces of food and such like, in the absence of other causative factors, rarely gives rise to ulceration. Much recent support has been given to the bacterial theory and notably by Robson and Moynihan, (4) who regard "oral sepsis" as a most prominent predisposing condition. This finds acceptance from many writers, and Mr. W. Bruce Clarke, (5) in support of the theory, reports a case in which gastric ulceration was the undoubted result of the ingestion of food which had undergone putrefactive changes.

The only practical classification is the one that divides these cases into two classes, namely, acute and chronic. Diseases which are always characterized by cardinal symptoms are rare indeed, so that it seems needless to speak of typical and atypical cases in this regard. Each case should be looked upon individually and its nature decided by the consideration given to it. Why should one continue to speak of the catarrhal, the gastralgic, the dyspeptic, the hæmorrhagic or the cachectic form of gastric ulceration when it is known that any individual case may present one or another or even all of such implied characteristics during its progress? The "simple erosion" and the "exulceratio simplex" rescribed by Dieulafoy, in which the loss of tissue is less decided than in ulceration proper, need only be mentioned here on account of their hæmorrhagic tendency.

No special predilection of location is shown by acute gastric ulcers, but the chronic form, which may be acute in origin though probably in the majority of cases assuming a chronic course from the beginning, is found to involve the pyloric region in somewhere about seventy-five per cent. of cases and in this most frequently the posterior wall near the lesser curvature. The large majority of ulcers in the duodenum are located in its first part close to the pylorus and the ulcerated area is not infrequently

continuous through the pylorus with a similar area on its gastric side. Cases are extremely rare in which such ulceration occurs below the common entrance of the bile and pancreatic ducts, though a similar process is found in the so-called peptic ulcer of the jejunum which in rare cases has ensued after the operation of gastro-jejunostomy.

Acute ulcers are multiple in about fifty per cent. of cases. They rarely exceed one half an inch in diameter, being round or oval, with clean cut edges of normal mucous membrane, and are obliquely conical in form, the apex of the cone being directed outwards and extending to the submucous, the muscular, or the serous coat according to the depth attained. Multiplicity is rarely observed in chronic ulcers though their frequent irregular shape is often suggestive of previous coalescence of parts. Their prominent edges are somewhat indurated and there is a condition of mild inflammatory infiltration in the immediately surrounding mucous membrane, their size being variable up to an area of several square inches. In depth they may extend beyond the limits of the viscus affected, without any exaggeration of symptoms occurring, so as to reach such viscera as the pancreas or the liver.

Hyperchlorhydria is a very frequent attending condition, but not always, however, as frequent analyses have demonstrated the continued diminution or absence of free hydrochloric acid in the gastric secretion in some undoubted cases of gastric or duodenal ulceration. In close relation to the existence of hyperchlorhydria is the condition of pyloric spasm and to this in turn a not infrequent gastrosuccorhœa. With regard to hyperchlorhydria it would probably be more to the point to say that frequently repeated analyses in such cases tend to show considerable variations in the amount of free hydrochloric acid present and in the majority of instances reveals an excess.

In practically all cases in which hæmorrhage has occurred the blood presents the characteristics of a secondary or chlorotic anaemia, the average decrease in hæmoglobin being from forty to fifty per cent. The urine which is sometimes scanty presents no definitely special characteristics.

From amongst the long list of complications and sequelæ of this disease may be mentioned as the most frequent, hæmorrhage, perforation, pyloric stenosis, hour-glass contraction, gastric dilatation, gastric tetany, *ulcus carcinomatosum*, perigastritis, peritonitis, subdiaphragmatic abscess, cholecystitis, empyema, and pulmonary tuberculosis.

Briefly, the symptoms and signs commonly present are, dyspepsia, with acid eructations, pain, vomiting, hæmatemesis, melæna, constipation, loss of flesh, tenderness, localized rigidity, probable tumor formation and anæmia with its attending characteristics. The appetite is variable though good as a rule, but such patients frequently refrain from even moderate eating on account of its consequences.

Pain in the epigastrium of varying severity usually follows the ingestion of a meal, sometimes almost immediately, but its time of onset varies from a few minutes up to two or more hours. Robson and Moynihan (6) believe that such variations depend upon the situation of the ulcer, claiming that the nearer a gastric ulcer is to the pylorus, the longer is the pain deferred, and that when the duodenum is alone involved the most frequent time of onset is after one to two hours. Early pain, a free interval, and then again late pain may suggest the presence of non-continuous ulcers of both stomach and duodenum. Relief from pain usually follows the occurrence of vomiting which most frequently ensues in from one to two hours after a meal, but may come on almost immediately. On the other hand when hyperchlorhydria is a prominent element of the disease, relief of at least a temporary character often follows the ingestion of food.

Hæmorrhage of varying degree is estimated to occur in about eighty per cent. of cases and manifests itself by hæmatemesis or by melæna or both together. Slight degrees of melæna are frequently overlooked, and when unassociated with hæmatemesis its likely origin is duodenal. Gastrorrhagia of a degree insufficient to give rise to vomiting is often only revealed by a microscopical examination of the stomach contents.

Epigastric tenderness is generally well defined and is capable of being elicited immediately below the ensiform cartilage and between it and the right costal margin, and when the duodenum is involved it is often more distinct to the right of the middle line and at a slightly lower level. Dorsal tender points have frequently been observed in the region of the tenth, eleventh and twelfth dorsal spines. Tenderness is also a characteristic of the benign tumor formation which is not uncommonly present.

Symptoms or signs attending the abundant complications are sequelæ to which this disease is liable need not be mentioned here, save one so commonly considered to be essentially present to warrant the diagnosis of perforation, namely the obliteration of liver dulness. With regard to this, Robson and Moynihan (7) state that "its presence or absence is void of any significance and is unreliable as an aid to diagnosis." In the few available records of perforated cases where note of this feature has been made, one finds that in only about half of the cases was liver dulness absent, but it is a feature that has been made note of so rarely that its precise value cannot be judged.

In the clinical picture of this disease the association of pain, vomiting and hæmorrhage is decidedly characteristic, but there are many cases of intractable dyspepsia in which the evidence of ulceration is not so clear and it is only by a most careful and exhaustive enquiry concerning the history and present condition of the digestive system, a thorough physical examination, and by chemical and microscopical examination, preferably repeated, of the stomach contents, that a diagnosis can be made,

while such conditions as gastralgia, carcinoma, cholecystitis, cholelithiasis, nephrolithiasis, tabetic crises and appendicitis are excluded. It should ever be borne in mind that in a small percentage of cases the first noticeable indication of disease may be an alarming hæmorrhage or symptoms of acute perforation.

Dr. Murdoch (8) of Pittsburg believes in the efficacy of orthoform in establishing a diagnosis in many doubtful cases, claiming that if relief from gastric pain follows the administration of orthoform, ulceration is present as this will only anæsthetize nerve endings when deprived of their cutaneous or membranous covering. This, though worthy of trial, would scarcely accord with the more generally accepted idea that the pain is not due to the exposure of nerve terminals to the contact of food or irritating secretions, but rather to their excitation by movements occurring in the ulcerated area.

As to the diagnosis of perforation occurring near the pylorus and especially in the duodenum it is interesting to note the frequency with which the condition has been mistaken for appendicitis. Records demonstrate such a mistake in diagnosis in from one-third to one-half of the reported cases of perforated duodenal ulcers. This admits of an anatomical explanation inasmuch as it has been shown that in such cases the extravasated contents usually find their way most readily towards the right iliac region owing to the presence of a small hillock in the transverse mesocolon beneath the pylorus, and to which special attention has been directed by Robson and Moynihan (9).

Prognostic estimates of this disease are extremely variable, Brinton placing the mortality from all causes as high as fifty per cent. Of cases treated medically only, the average mortality is estimated to be about twenty-five per cent. of which fifteen per cent. is allotted to perforation and five per cent. to hæmorrhage, and the remainder to other causes. Of cases treated surgically, the average mortality in 1900 was sixteen per cent. whereas in 1904 it was five per cent. Other average estimates are these : forty per cent. of cases treated medically undergo relapses; twenty per cent. of protracted chronic cases develop pulmonary tuberculosis, and at least six per cent., but probably many more, give rise to gastric carcinoma.

The treatment of this disease is at present its most interesting phase, but one is compelled to resort to a mere statement of conclusions in this regard. In all cases it is at first essentially medical. The earlier this is instituted the better will be the results, and if carried out with strict attention to detail in the matters of rest and feeding and for a sufficient length of time, which involves at least four to six weeks in bed and much, further prolonged supervision, permanent cure will result in about fifty per cent. of cases. Unfortunately, however, many of the cases are not diagnosed in their early stages and even when diagnosed there is a tendency

to a lack of co-operation between the physician and the patient in the matter of methodical treatment with the result that chronicity is established, relapses are common, complications and sequelæ ensue so that a condition is arrived at in which medical treatment alone is of little benefit, and in which surgical procedures offer the only hope of permanent relief.

Immediate surgical treatment is positively indicated in all cases in which perforation has occurred, and its advisability should be considered in cases in which a single profuse hæmorrhage does not yield promptly to medical treatment, while it is also indicated in the recurring and debilitating hæmorrhages so frequently associated with chronic ulceration. Of other frequently attending complications, pyloric stenosis with gastric dilatation, and hour-glass contraction can only be relieved surgically. Furthermore, a life of chronic invalidism attended by imminent danger of its rapid termination can by surgical treatment in the great majority of cases be rapidly converted into one of perfect health, safety and usefulness.

The present day tendency is towards the early adoption of surgical treatment in all such cases when medical treatment fails after a fair trial to bring about prompt and permanent relief and the results of much recent work done by various competent surgeons undoubtedly demonstrate the wisdom of so proceeding.

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CLINICAL CASES IN THE HOTEL DIEU HOSPITAL.*

By EDWIN RYAN, M.D., Kingston.

NEPHRECTOMY FOR HYDRONEPHROSIS.

MRS. McN., aged 48, was referred to me on July 14th, by Dr. Cooper, of South Renfrew. She was the mother of a large family, had an excellent family history, and her previous health was good. For about four months before her admission to the hospital she had been

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troubled with attacks of painful and frequent micturition. There was a large well-defined tumor situated in the right hypochondriac epigastric and umbilical regions. The tumor diminished in size upon brisk purgation. There were frequent attacks of intense pain, referred mostly to the umbilical region. The urine was normal in quality and quantity. A hydronephrotic kidney was diagnosed and operation decided upon. The lumbar incision was used. It proved too small and was carried freely along the crest of the ilium and the kidney with the attached mass was removed. There were few adhesions and no great difficulty experienced after the opening was enlarged. The wound healed without incident and the patient left the hospital on September 11th. She has since enjoyed excellent health.

Upon two points in connection with this case I would beg to offer comment, namely, the difficulty of diagnosis and the method of operation. The situation of the tumor, the extent and seat of pain were confusing. The lumbar region gave little assistance. There was no appreciable increase of dulness; nothing at all like what one meets with in a cancerous or tuberculous kidney. The bladder trouble was suggestive, yet the symptoms were not more pronounced than those ordinarily met with in cases of abdominal tumors. The one really diagnostic feature was the partial disappearance of the tumor upon brisk purgation, though no copious flow of urine at that period was detected.

The proposed methods of treatment are various, friction, paracentesis, injection of irritants, nephrotomy, nephrotomy with subsequent nephrectomy, and nephrectomy. The operation of nephrectomy seems the only rational cure. The other methods of treatment appear to be but expedients, not without danger and rendering the radical cure in the end more difficult. To stitch to the integument the cyst wall or the remnant of kidney, with the subsequent inconvenience and danger of fistula or sepsis, does not appear to be in the spirit of modern surgery. As to the kidney, or rather the shell remnant, I think its economical value is of little account. The fluid it secretes is not urine and, therefore, its emunctory duty is of little value. As a primary operation, nephrectomy presents no great difficulty. As a secondary operation, with adhesions formed, and in a field soiled with discharges, I am not so sure it would pass off so easily.

PRIMARY CARCINOMA OF THE LIVER.

Mrs. B., aged 48, Marmora, was admitted to the hospital on April 11th, 1903. She was the mother of several children and her previous health had been good. Her family history was excellent. About one month before her admission, while lifting a heavy weight, in her own

words, she "felt something give way in her right side." Shortly afterward a lump made its appearance below the right costal margin. There was a sense of weight and dragging, accompanied by slight discomfort, but at no time was there any distinct pain. When she first came under observation she was a healthy, well-nourished woman, no cachemia. The liver was very much enlarged. To the right of the umbilicus and in the mammary line a distinct globular tumor was projecting. From the history of the case and from the physical signs of the projecting tumor I felt I had to deal with a case of hydatids of the liver. On April 25th I made an incision over the projecting mass. When exposed, the tumor projected well below the margin of the liver, and certainly had a cystic appearance. It was only upon opening that its malignant nature was discovered. The patient died of exhaustion on July 10th following. The autopsy was performed by Dr. W. T. Connell, who reports:—

The abdomen and lower extremities were markedly oedematous. The abdomen was distended with a large solid mass just below the right costal margin and in the epigastric region. On opening the abdomen and removal of dropsical fluid the liver was found reaching an inch below the umbilicus and extending to the left as far as the spleen. The other viscera in the abdomen were examined and found quite normal. Some of the glands in the portal fissure and along the coeliac axis were enlarged. The right lung was shoved up as far as the third rib, but was otherwise normal, so with the left lung and heart. Liver weighed $11\frac{1}{2}$ pounds. It was filled with a huge mass of growth which breaks out on the surface in large orange shaped nodules. The left lobe lateral portion is the only part not affected by large central nodules, but it contains numerous small secondary nodules. The growth itself was very soft and fatty looking. Microscopic sections from the edge show typical encephaloid carcinoma, the cells being large and packed in small alveoli. In the centre the sections are simply a mass of degenerated cells.

Two points about this case are worthy of notice; the rapid growth of the mass and the tumor-like projections which were certainly very deceptive.

MAMMARY HYPERTROPHY.

Lottie B., aged 18, came to the hospital in July, 1904. Her mother was an Indian woman, her father a half-breed. The family history was excellent. Until the time of puberty her health had been good. From that time on her breasts gave her trouble, being subject to occasional attacks of pain and swelling. In April, 1904, her breasts began to increase rapidly in size, and when she first came under my observa-

tion in July they were enormously enlarged. The nipples had disappeared under the tension. There was little or no tenderness. Treatment was begun at once, strapping, local applications, and the internal administration of iodide of potash. This treatment had absolutely no effect, and as the patient refused to submit to operation she left the hospital three weeks from the time of entering. She returned on October 15th following, her condition being practically unchanged. She was now prepared to undergo operative treatment. On October 17th the left breast was removed. The gland on amputation measured 25 inches in circumference, $9\frac{1}{2}$ inches in long diameter, $3\frac{1}{2}$ inches in short diameter, and weighed 10 pounds, 4 ounces. On November 25th the right breast was removed. It measured 25 inches in circumference, 9 inches in long diameter, $3\frac{1}{2}$ inches in short diameter, and weighed 9 pounds 2 ounces. The patient herself weighed 95 pounds upon recovery. During the operation venous sinuses were encountered, some fully one-quarter of an inch in diameter and the hæmorrhage at times was very difficult to control. The gland tissue would not hold a forceps and the best control of hæmorrhage was obtained by hot towels and pressure. In fact, towards the end of the operation I abandoned any attempt to stop bleeding and shelled the breast out quickly when the bleeding ceased at once. I am sure this method was a decided gain. The patient's recovery was uneventful, the wounds healing rapidly, and the patient left the hospital before the end of December.

Pathological report by Dr. W. T. Connell is as follows:—There is mammary hypertrophy. The microscope shows distinct lobular grouping. The lobules consist of irregular alveoli with single or double epithelial lining, the cells being spheroidal or cubical. A distinct lumen was present in most, but not all, the alveoli. There was no active secretion, nor any evidence of cyst formation. The specimen seems to approximate closely to that of ordinary actively growing, but non-secretive breast tissue.

BRONCHO-PNEUMONIA—A CONTRAST BETWEEN URBAN AND RURAL RESULTS.*

By J. BIGGAR, M.D. Tillsonburg.

IN an experience of barely a year in general practice it is difficult to find a subject of a sufficiently interesting character to be worthy of presentation to this Association. I have met, however, with one phenomenon by which I have been greatly impressed—contradicting as it does, not only the commonly accepted teachings, but also my earlier

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experience as resident in the Children's Hospital. This is the large percentage of recoveries from broncho-pneumonia that occurs in rural practice.

It is occasionally a wise procedure to answer objections before they are raised, and in discussing any such condition as broncho-pneumonia and claiming 100 per cent. recoveries, an objection that would in all probability be made, is that the diagnosis has been at fault. Therefore, may I be permitted first of all to state on what symptoms and physical signs this diagnosis was made, in the twenty-six cases which I was called upon to attend during the last six months.

Though in a few instances the disease had set in abruptly, a history was generally obtained of a cold, caught from two days to a week previously, with which the child had had some coryza and bronchitis. This condition had become progressively worse and when first seen the little patient was found lying more or less stupid and slightly cyanotic, making little or no complaint, save with the cough, which was frequent, usually followed by crying. The temperature ranged between 101.3 and 104, the pulse between 120-180 and the respirations, labored and with the accessory muscles in full play, between 40 and 100.

Examination of the chest revealed recession of the soft parts with each inspiration. The results of percussion varied. Hyper-resonance over the front of the chest was invariably present. In some of the cases areas of dullness posteriorly could be easily detected from the first. In others these areas were not discoverable till later on in the attack, but in all the cases one, or more usually several, dull areas were present at some stage of the disease. The breath sounds were harsh broncho-vesicular over both lungs, and accompanied in numerous instances by a generalized fine crepitant rale. This rale was occasionally confined to the areas of bronchial breathing which were constantly present and corresponded, if any such had been discovered, to the areas of dulness mentioned above.

This was the clinical picture presented by the twenty cases to which I have reference and it is, as far as I can learn, the picture of broncho-pneumonia as drawn by the authorities.

Brief reference only need be made to the prognosis as generally given. Allbutt and Eustace Smith agree, that in infancy broncho-pneumonia almost inevitably terminates fatally. Holt's best statistics show a mortality of 10 to 30 per cent. of all cases even in private practice—whereas in hospital work the percentage is much larger. Of his cases under a year of age 66 per cent. were fatal. We had last year in the Hospital for Sick Children 18 cases, with a mortality of 63 per cent. Of nine of these under a year old, eight died, and in the ninth there was a reasonable doubt, as to whether the condition was broncho

or lobar pneumonia. In short, from his text books and hospital experience the student is taught to expect that the diagnosis of bronchopneumonia correctly made in an infant is, in a great majority of instances, merely the fore-runner of a fatal termination.

The ages of my patients varied from six weeks to three and one-half years. There were eleven under one year old and six between one and two. From the records I have listed ten of the cases to have been severe, six of medium severity, and four comparatively mild attacks. Among the severe are included a malnutrition baby twenty months old, weighing sixteen pounds, a baby six weeks old who had had a sharp attack of inanition fever during its first week of life, a baby four months old who had suffered for some time from intestinal indigestion, and a child about two years old whom I had attended a few months previously in a severe attack of acute gastro-enteritis, from the effects of which he had not as yet completely recovered.

Notwithstanding the fact that I lay claim to a series of 100 per cent. recoveries from this disease, some of them occurring in patients badly handicapped at the outset, I have no specific remedy to vaunt, and under treatment I wish to lay emphasis upon one point only, as being the essential factor in the outcome. This is the attention that should be paid to the digestive system; firstly by a thorough cleansing of the alimentary canal, and secondly, by the ordering of such a diet as will afford ample nourishment and at the same time will be within the power of the enfeebled digestion to handle.

The sweeping out of the digestive tract may be effectually accomplished by the administration of calomel in broken doses, followed by castor oil or infusion of senna, supplemented in some cases by rectal irrigations. The consequent stools show, in nearly every instance, the great necessity that existed for active purgation, and this is, in a large number of cases, followed immediately by improvement in the general condition, and may be repeated at short intervals with advantage.

With regard to dieting, no definite rule can be laid down, but I have found for milk-fed children Holt's method of percentage modification very useful, and either begin with a rather weaker mixture than is perhaps altogether necessary, working gradually up to the stronger, and at the same time watching the motions very carefully for evidences of failure to digest the food, or add to the weak mixture some form of pre-digested food, as Liquid Peptonoids or Bovinine, to increase its nutritive value. I have found in some cases where the digestion was badly disordered, or excessively weak, a cream and whey mixture eminently successful, providing as it does an easily digested and nourishing food. In any diet variants are generally necessary and for this

purpose broths and albumen or barley water, to which peptonoids have been added are satisfactory.

In all cases, whether the patient be milk-fed or breast-fed, it is essential to lay down specific directions with regard to *regularity, moderation and slowness* of feeding, indeed, in the case of nursing babies, these directions are of paramount importance—as it is a matter of common observation that if a breast-fed baby be ailing, the mother's chief desire seems to be to have him nurse at all and every hour of the day and night, thereby throwing a greater strain on his already upset digestive system.

The only other remedial measure upon which I have come to place much reliance is active counter-irritation of the chest. This was procured in my cases by means of the old-fashioned mustard plaster, applied front and back every four hours, and immediately replaced upon its removal (when the skin had been thoroughly reddened) by warm flannel cloths, care being taken in effecting the change to prevent any chilling of the surfaces. In the majority of the cases these simple measures alone sufficed to ensure recovery, though as a placebo to the parental anxiety some harmless mixture was usually prescribed. If, in some of the more severe cases, stimulants became necessary whiskey and strychnine were used.

The conclusion to which I have come by the result in these cases is, that a country practitioner finds his patients endowed with a better stamina, a sounder constitution, a greater resisting power—call it what you will—than is usually found in an urban population. In consequence his sick babies will, as a rule, recover, if they are provided with suitable nourishment, and if at the same time they are not overdosed with useless and often harmful drugs; the effect of which, in many cases, is merely to upset still further the digestive system, already deranged by the disease.

Finally, it is a matter of reproach to some of the profession, that lives are sacrificed annually to a mistaken confidence in the efficacy of medicines, when all that is necessary to the patient's welfare is the administration of a proper diet.

REMARKS ON THE SURGICAL TREATMENT OF CHRONIC NEPHRITIS, WITH NOTES OF CASES.*

BY H. HOWITT, M. D., Guelph.

THE *New York Medical Record* of the 4th of May, 1901, contains an article by Dr. George M. Edebohls on "Bandages for Nephrotosis," in a paragraph of which there is a distinct proposal for the surgi-

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cal treatment of chronic nephritis that, no matter what changes or improvements may be made in the technique, gives the doctor priority in directing the attention of the profession to this new field of surgery. In the paper he advises, when the kidney is movable, decapsulation and nephropexy and simply decapsulation when its position is normal.

Prior to this formal proposition to treat chronic Bright's disease by decapsulation, several surgeons had reported the disappearance of albumin and casts in the urine of patients after decapsulation or partial decapsulation and nephropexy of a diseased kidney.

In the classification of chronic nephritis many of our authorities differ from each other widely. Dr. Edebohls gives, from a surgical point of view, a very practical plan. He designates as interstitial nephritis all the cases in which the connective tissue is involved chiefly; as parenchymatous, those in which the involvement of the secretory apparatus forms the salient feature, and as diffuse when both these tissues are involved equally.

In regard to the disease and its surgical treatment the main views held by the doctor, stated briefly, are as follows, viz: That in chronic nephritis there is faulty or insufficient arterial blood supply, hence impaired nutrition of the secretory apparatus in consequence of which the cells fail to mature and are shed prematurely thus leading to imperfect function manifested by retention in the system of urea and other effete products and the presence of albumin and casts in the urine.

That decapsulation by removing an impervious membrane permits collateral circulation to be established between the vessels of the secretory tissue of the organ and those of the vascular perirenal fat and adjacent structures which in time restores the damaged secretory tissue.

That the average time for a cure after the operation is about eight months.

That the *immediate* beneficial results which frequently follow the operation are due not to the relief of tension, but to the necessary manipulation of the kidney during the operation stimulating its circulation.

That after the operation a new capsule is formed in from three weeks to as many months, which is sometimes thicker and sometimes thinner than the original one, but always more succulent and vascular.

That neither the original nor the new capsule ever causes trouble in chronic nephritis by tension.

That unilateral chronic nephritis is more common than is generally supposed.

And that the interstitial, parenchymatous and diffused varieties of the disease are all suitable for the treatment.

A number of surgeons differ from the doctor in reference to the rôle played by tension in chronic nephritis. In acute nephritis we have invariably increased tension of the capsule and in all the chronic varieties of the disease, while this feature may not be easily demonstrated, there is general-

ly undoubted evidence of abnormal tension in the whole or some portion of the kidney structure proper, that is increased denseness due to thickening of the connective or parenchymatous tissue or of both according to the parts involved.

Though removal of the capsule under favorable circumstances may undoubtedly lead to complete restoration of the deranged function, yet in my opinion, in the majority of cases of chronic nephritis it fails to fulfil all the indications. Let me illustrate this by a somewhat parallel condition in another structure of the body. Take for instance that very painful form of osteitis which not uncommonly affects the lower end of the tibia, here in the early days of the acute stage a simple incision of the periosteum over the part often gives prompt, complete and permanent relief, but later in the disease a section of the affected bony tissue must be removed in order to obtain good results.

May we not maintain that the relief of tension plays a more important part in the good results which at times follow the operation than the chief exponent of it is at present willing to admit? In regard to the *immediate* beneficial results which usually follows decapsulation, is it not more reasonable to attribute it to the free oozing which takes place from the denuded surface lessening the tension, than to the manipulation stimulating the circulation? It is certainly a more rational explanation. Then why not take a step further and relieve more quickly the tension of the deep portions of the organ?

With the handle of a scalpel or other suitable blunt instrument a free incision can easily be made along the convex border of kidney down to the pelvis. By this method the arterial terminals and capillaries are less injured than those of the venous system of the part, hence there follows abundant oozing from the right quarter to relieve the engorgement.

Then if it is thought desirable to endeavor to hasten the establishment of collateral circulation, I see no valid objection to fastening in the kidney wound a section of the perirenal fat or other available vascular tissue.

In my last case, in addition to excision of the capsule, I made a long and deep incision in both kidneys and the happy result which followed far exceeded my most sanguine expectation.

CASE I.

Master W. M., aet 4 years; marked tubercular family history; admitted to the general hospital on the 10th of December, 1901.

Previous History: Early in the preceding July, the mother noticed a fine rash on his body, but as he appeared to be well otherwise no attention was paid to it. A month later when Dr. McQueen, the family physician, was consulted there was general anasarca and the urine which was scanty contained a large amount of albumin. In spite of the excellent

plan of treatment adopted by the doctor, the boy gradually grew worse and later the abdomen had to be tapped every three or four days.

On his admission to the hospital beside the general anasarca and distended abdomen, there was some oedema of lower part of lungs at back, heart hypertrophy and gastric irritability and uræmic symptoms were present. The daily amount of urine voided was only 10 oz. It contained a large amount of albumin and hyaline and granular casts.

Diagnosis. Chronic parenchymatous nephritis.

The day after he entered the hospital the abdomen was tapped and he was prepared for operation and on the following morning the capsule was removed from both kidneys.

The organs were somewhat enlarged, whitish in color and more dense to touch than normal with capsule neither thickened nor abnormally adherent.

The wounds healed kindly and by the 6th day the daily amount of

urine increased to 28 oz. and the general oedema disappeared slowly afterward. There was no recurrence of the ascites. Later the daily amount of urine fell to 20 oz. The skin aided by vapor baths acted freely. By the middle of April there was less than 5 per cent. of albumin by bulk, then he had a severe attack of influenza and broncho-pneumonia which terminated fatally in less than a week.

CASE II.

Miss M. M., aet 17 years; good family history; admitted to a private ward of the Guelph General Hospital on 21st of November, 1903.

Previous History :—Enjoyed excellent health until the spring of 1902, then she began to fail and her ankles became swollen. On consulting the family attendant after a few days treatment all the symptoms disappeared and she was pronounced cured. The following November the trouble returned and an examination revealed that her urine contained casts, and 2 grams of albumin per litre. In March, 1903, she had an attack of influenza which aggravated the disease. She then consulted an eminent physician in Toronto who reported that the daily amount of urine was only 18 oz., and that it contained hyaline casts, blood and a considerable amount of albumin. Under his treatment her health improved very much and she gained in weight, strength and color. By the following August her health appeared to be excellent and an examination failed to detect casts in the urine and there was merely a trace of albumin. Toward the end of September her trouble returned and her brother, a student of medicine, suggested operative measures. Before the other members of the family consented, she was taken to Baltimore for Dr. Osler's advice and remained in Johns Hopkins Hospital for two weeks under observation and treatment, and when there the following facts were obtained, viz: Blood

pressure above normal; hæmoglobin, 75 per cent; sp. gr. ranged from 1,007 to 1,017; albumin half-gram to litre; casts, and urea always low; and also that the amount of albumin increased to 1 gram per litre when given considerable salt with her meals.

During the five days that she spent in the Guelph General Hospital before the operation, the daily amount of urine was 37 oz.; sp. gr. 1,010; albumin varied from 1 to 2 grams per litre; urea 1 per cent. Diagnosis interstitial nephritis.

Bilateral decapsulation was performed on the 26th of November. Both kidneys were harder than normal, had capsule adherent and a granular appearance of subscapular surface.

Five weeks after the operation an examination of the urine gave—daily amount 55 oz.; sp. gr. 1,014; albumin, 1 gram to litre; urea 1.8 per cent. No casts were detected on this occasion. She left Guelph a week later for Southern California and ten months afterward Dr. Sherry of Pasadena, reported the urine contained no casts and only a trace of albumin.

A month ago here sister wrote: "I am glad to tell you that M—— has passed an excellent winter, she has been in continued good health and is a more than usually robust looking girl. She weighs 125 pounds. No test of urine has been made since last October."

CASE III.

W. E., male; aet 21 years; good family history; entered the hospital on the 23rd of November, 1904.

Previous History:—When 7 years of age he had measles and congestion of the brain and was very ill for many weeks. Four years ago he had pleurisy and had his chest aspirated. Otherwise he had been always healthy until last June when he had a severe chill while attending a military camp. After this although he continued at his usual employment in a planing mill, he had not his former vigor. About the 1st of September his face became puffy under the eyes and his legs swollen. He then consulted Dr. P. Stuart of Milton, who found that his urine was loaded with albumin. Under the treatment prescribed by the doctor, he improved quickly and in a short time the urine became normal and all trace of the oedema disappeared. In two weeks, without asking the advice of his medical attendant, he returned to his work. The disease recurred shortly afterward in an aggravated form. Owing to changes at his home he was unable to receive the attention which his condition of health required. Dr. Stuart placed him under my care in the Guelph General Hospital.

Condition on admission: Marked general anasarca; in fact his body was fairly "water-logged"; scrotum and penis distended to immense proportions; large quantities of free fluid in abdomen and oedema of the pos-

terior portion of lower lobe of both lungs. Marked arterial sclerosis, more pronounced on left side; clouded mental condition—answered questions slowly with a distinct interval between each word. He had no headache, but was always tired, very weak and drowsy. The first day after admission he passed 18 oz. of urine, the specific gravity of which was 1.032. It contained, according to Esbach's test, 4 grams of albumin per litre; reaction alkaline; odor very offensive; large amount of pus, and large and small hyaline and granular casts.

Diagnosis: Chronic, parenchymatous nephritis.

He was put on milk diet, kept between woollen sheets with dry heat applied and bowels rendered active by saline. A daily hot-air bath preceded by a hypodermic injection of one-eighth grain of pilocarpin. We endeavored to irrigate the bladder every morning, but rarely accomplished the work owing to the great oedema of the prepuce until we lessened the local swelling by puncturing the parts, then the urine became acid and free from offensive odor.

He grew worse in spite of all our efforts. The hot-air baths gave free action of the skin, but the more freely the skin acted the less the amount of urine secreted and the greater the amount of albumin. During the first week in December the daily amount of urine was only 11 oz., and later it decreased to 9 oz., and it contained more than 13 grams of albumin per litre.

The patient had now urgent attacks of dyspnoea, and a marked cyanotic condition of his lips and skin and a distressing cough. Before the patient had arrived at this critical stage, Dr. Stuart and I had advised operative measures, but the members of his family would not give their consent until Dr. Wm. Caven saw the patient in consultation on the 11th of the month.

On the following day under ether anæsthesia assisted by Dr. Stuart, I decapsulated both kidneys and made a blunt incision along convex border of each fully two-thirds of its length and down to, but not into, the pelvis. The hæmorrhage from the kidney wounds was not as great as I expected.

The incisions in the kidneys were not sutured. Silkworm drains were introduced and the flank wounds closed with buried catgut.

When the incisions in back were made, serum fairly flowed from the tissues.

The kidneys were paler, larger and firmer than normal, confirming the diagnosis which had been made.

For a few days considerable blood oozed from the wounds, evidently it came from the renal incisions. The urine at first contained a large amount of blood, but this factor completely disappeared by the end of the third day. The daily amount of urine increased rapidly and the amount of albumin quickly decreased. On the fifteenth day after operation the

urine chart read: Amount 93 oz.; sp. gr. 1,015; color, amber; albumin, none; cast, none; and three days later the amount passed was 173 oz.; sp. gr., 1,010. The quantity continued large until the oedema disappeared, then the urine became normal in every respect.

On the day of his operation his weight was 184 pounds and three weeks later only 134 pounds, so that one can easily judge what an enormous quantity of serum must have been retained in the tissues.

He left the hospital on the 30th of January and has not had a single symptom of his trouble since. He is back at his work in the mill, weighs 160 pounds and has every appearance of health and vigor. I examined his urine quite recently and found it normal.

NEW METHODS OF STUDYING AFFECTIONS OF THE HEART.

By A. J. MACKENZIE, B.A., M.B., Toronto.

THE *British Medical Journal* publishes during March and April, a series of five articles, by James Mackenzie, of Burnley, on new methods of studying affections of the heart. These are illustrated by diagrams representing tracings taken from the pulse in different cases.

The functions of heart muscle fibres are rhythmicity, excitability, contractibility, conductivity, and tonicity, that is to say, that these fibres possess the power of rhythmically creating a stimulus, of being able to receive a stimulus, of responding to the stimulus by contracting, of conveying the stimulus from muscle fibre to muscle fibre, and of maintaining the condition known as tone. By virtue of these functions, the heart maintains its activity. It possesses no motor nerves, properly so-called, the vagus and sympathetic supply having only a moderating influence. Engelmann demonstrated that these functions might be affected separately and Wenckebach showed that, in such a case, an arrhythmia peculiar to that condition would manifest itself while these functions are inherent in all muscle fibre, some fibres possess to a greater degree than others the power of originating stimulus, namely, the fibres at the mouth of the great venis and adjoining portion of the auricle. From here the peristaltic wave of contraction passes over the heart, going more slowly over the auriculo-ventricular muscular ring, i.e., the fibres joining the auricle and ventricle, because this part is of a more embryonic character than the remainder of the muscle. This muscle ring possesses, as the writer shows later, a greater power for automatically originating muscle impulse than the fibres in general.

Mackenzie first explains how he estimates conductivity. By means of tracing, running parallel to one another and to a time, tracing from the

radial pulse and the jugular by a tambour placed above the right sterno-clavicular articulation, a comparison can be made of the time of the auricular and ventricular systoles. There is an interference with the venous impulse by the carotid pulse; but this is an advantage, as it marks the same tracing both auricular and ventricular impulses. In most cases the jugular gives a noticeable impulse.

The intersystolic period or, as it is abbreviated, the a—c interval is really made up of three events: (1) the systole of the auricle, (2) the transmission of the stimulus from auricle to ventricle, (3) a minute portion of time taken up by the interval during which the ventricular pressure is rising before the opening of the semilunar valves. As (1) and (3) are practically constant, they may be ignored, and variation of the a—c interval regarded as being due to the variation of the rate of stimulus conduction. The normal time for this is one-fifth second, and it is fairly constant in normal conditions; at the same time it may be lengthened to some extent without causing arrhythmia.

With the close of each contraction, all the muscle functions are, for the time being, abolished; during diastole they are gradually restored, normally simultaneously. If one be depressed its recovery does not take place so speedily as the others, and an interference with the regular sequence of events results; thus, if a stimulus begins prematurely at the auricle, the conductivity has not been completely restored, and there results a lengthening of the a—c interval. Sometimes the conductivity may be so depressed that the stimulus fails to cross the auriculo-ventricular ring, and our tracing will show two or more, auricular beats without a ventricular systole. This longer interval gives a rest to the fibres and our next a—c interval is shorter. Thus we have an arrhythmia. This may occur with some regularity and there is a resultant bradycardia; and, in extreme cases it may induce syncopal or epileptiform seizures, the Adams-Stokes syndrome.

It has been shown experimentally that the application of a ligature around auriculo-ventricular groove will prevent the conveyance of a stimulus from the auricle to the ventricle, resulting finally in the ventricle beating in a separate and independent rhythm, from the auricle (heart block), Mackenzie has demonstrated by tracings that such an independent rhythm may be the cause of certain bradycardias in the human subject. Analysis of tracings reproduced showing that the auricular and ventricular impulses are only synchronous at lengthened intervals in such cases.

While certain phenomena, occurring during the administration of digitalis are generally understood, there are others which have baffled enquirers. The writer has not found any marked difference in the various methods of administering the drug, but points out that digitalis has a peculiar tendency to affect primarily those functions of the heart muscle

fibre which have been previously damaged. Thus, if conductivity is normal, digitalis has no effect upon it; but, where this function was previously depressed, it was very readily affected with a resulting arrhythmia, due to the dropping out of ventricular systoles. Another point of importance is that the drug affects all non-striated muscle fibre; and, before it can have an appreciable effect upon the heart, it may injuriously affect other structures, *e.g.*, the musculature of the gastro-intestinal system.

It is generally agreed that digitalis has the effect of slowing the heart rate, but whether it is due to slower formation of stimuli or to decreased excitability of muscle fibre, or whether, as Engelmann terms it, it is a chronotropic or a bathnetropic effect, the writer knows no means of determining; but he cites a case to prove that it does not affect normal conductivity, *i.e.*, has not a chronotropic effect. Contractility is the most important function of the heart muscle, as on it depends heart efficiency and it depends on rest. If stimulus succeed stimulus too quickly to allow for recovery, this function becomes depressed. By slowing the heart rate, digitalis may allow time for the recovery of function, but it may also produce the effect directly, a very interesting proof of which the writer adduces in the study of a case in which "pulsus alternans," a pulse regular in time, but consisting of alternating long and short beats, followed the administration of digitalis. The auricular impulse was not affected and the alternation was due entirely to differing lengths of ventricular systole. Wenckebach's explanation of this form of pulse may be quoted, "When contractility is depressed if time be allowed for a full and strong contraction, the longer duration of contraction encroaches upon the period of rest, so that by the time the next stimulus arises, the contractility has not sufficiently recovered, and a smaller and shorter contraction results. As this contraction is shorter in duration the period of rest is thereby lengthened before the next stimulus arises, so that the contraction will be stronger and longer, being longer it will again encroach upon the period of rest, and so the process of alternation goes on."

While normally the peristaltic wave of contraction begins in the auricle and passes down to the ventricle, in certain conditions we have a reversal of the process and an inception of the impulse in the ventricle, transmitted backward through the auricle; and the recognition of this is necessary to the understanding of certain forms of arrhythmia and of the action of digitalis in some cases. This abnormal sequence is demonstrable from such tracings as were described at the beginning of this article. When a pulse is present in the jugular, if the auricle is active, it will undoubtedly always produce a wave with its systole; but, if the rhythm is ventricular in origin, then no wave will appear at the time

usually occupied by the auricular systole, the jugular pulse being found to be synchronous with the ventricular systole. This condition occurs in advanced cases of mitral disease; the appearance toward the end of life of the irregular, so-called "mitral" pulse, is frequently the sign that the heart has taken on the ventricular rhythm. An anatomical basis has been suggested in a distended, paralyzed auricle which cannot originate an impulse, but through which the ventricular impulse is freely transmitted by the incompetent valves. Digitalis here depresses the contractility of the heart muscle fibre; when there is not time given for the recovery of the function, the contraction is weaker and the beat small, or it may not be strong enough to send an impulse past the valves and a beat is missed. Then, after a long pause, a large and long contraction occurs and is again followed by a very feeble contraction. The writer quotes cases with tracings in support of this, and to show the extreme susceptibility of the heart to digitalis when the rhythm is ventricular.

The cause of this inception of the heart rhythm by the ventricle has been investigated by the writer for some years, and he has concluded on evidence, which, however, is only presumptive, that it is dependent on a condition of over-excitability in the fibres joining the auricle and ventricle, and that here is the starting point of the ventricular rhythm. The experimental evidence is founded especially on the work of Gaskell, who showed that these fibres, in cold-blooded animals, were extremely sensitive to stimulation. Immediately the needle touches this region a series of rapid contractions results, while every other portion responds with but a simple contraction. Now, as the rhythm described as the ventricular and the occurrence of ventricular extra systoles, those without corresponding auricular systoles, proves the origin of an impulse, not at the ordinary auricular starting place, it seems reasonable to conclude that these highly excitable fibres are responsible. Further evidence is adduced from a study of the relation of the a—c intervals to the ventricular extra-systoles.

The treatment of such cases, and here the writer includes as due to this cause many cases of tachycardia, and irregular pulse to which various diagnoses are applied in the absence of preceding valvular lesions, would depend on some method of reducing the excitability of these a—v fibres: but, unfortunately, no method of treatment has proved effective. They may revert to the original rhythm, and the physician flatter himself that his medication is effective; but the next case may be refractory. Digitalis, it has been seen may produce the condition. Mackenzie suggests that this may be occasioned by a depression of the other functions, while failing to affect the a—v fibres, which would then be relatively excitable.

The whole subject is of extreme interest, and the author's work the most significant that has been reported for some time.

THE NURSE; HER PLACE AND HER EQUIPMENT.

By JOHN HUNTER, M.D., Toronto.

I HAVE been asked to give an address to you, the class of nurses, who have just completed your course, at the Toronto Western Hospital. This honor came very unexpectedly, and though highly appreciated, yet, like everything else worth having, it had to be bought with a price. I have had to select a subject in the hope of being able to cluster around it a few suggestions that might be of some use to you in the years to come.

Several topics came to my mind, but none seemed more appropriate than the one, the title of which you have just heard. You all, I presume, go to church very regularly and, therefore, must be familiar with the orthodox division of a text into different heads. I shall divide mine—The Nurse—into two, I. her place, and II. her equipment.

HER PLACE.

Biblical literature teaches us that the advent of our race upon the earth was soon followed by suffering and death. With man, as he spread over the antediluvian world, lurking about him in the crevices in the walls of the ark, and following hard after him, wherever he has fixed his abode throughout all the centuries, disease in some one or another of its hideous forms has been ever present—in social life, in the ghastly plague, in the gory carnage of war, in the squalid wretchedness of pestilence and famine, and in the loathsome vices of intemperance, and of immorality. “In every age and in every clime” from the agony of soul and body of the victims of disease, has arisen a ceaseless cry for help from the gentle hand, and for sympathy from the compassionate heart.

This brief glance over our history settles beyond dispute the fact that the nurse has a place, co-extensive and co-temporary with the human race. No other calling can claim a wider field or a more ancient heritage. In the person of some one or other,—grandmother, kind-hearted relative or friend, mother, wife, sister, trained nurse or angel,—synonymous terms it may be, for is not each alike supposed to keep unwearied vigil over the sick couch—the nurse has had a place, throughout all the cycles of the ages.

From creation down to the earlier decades of a century ago, disease was generally believed to be either a direct visitation of Providence, or else due to the presence in the system of some vile humor. In the former relief was to be sought for in prayers and incantations, whilst the latter was to be driven out by sweating, purging, bleeding or blistering. The physicians and surgeons whose practice was governed by these dogmas, were quite content to avail themselves of any helpers,

especially such as possessed the virtues of meekness, patience and kindness. The discovery of micro-organisms as one of the most potent factors in the etiology or causation of disease, and the propagation of the doctrine of aseptic and antiseptic conditions evolved a place that could only be filled by one having special technical knowledge and skill. The position occupied by the modern trained nurse is the product of the evolution that has taken place in scientific medicine and surgery.

But I must hasten on, so will briefly summarize what has already been said, as follows.

I. Ever since disease and suffering came into the world, there has been *a place* for the nurse. II. The advent of aseptic and antiseptic methods has evolved *the place* so well filled by the modern trained nurse.

HER EQUIPMENT.

Reference has just been made to the conditions that have evolved the trained nurse. There is now practically no scepticism in regard to the part played by micro-organisms in the production of disease, and more scientific methods of dealing with it has developed, since bacteriology and pathology have furnished us with this knowledge. We hold now that just as imperative an obligation rests on physicians, surgeons and nurses to prevent the propagation of disease as is the obligation to mitigate or remove its consequences in suffering or in disability. You have received as nurses during your attendance in this hospital that instalment of your equipment, that it was the duty of its staff and officers, to provide for you, viz., a thorough course of instruction and practical experience, in the best methods science has yet given for the prevention and cure of disease. It will be a criminal act on your part when in the discharge of your duty you fail or neglect to give your patients the full benefit of the knowledge and experience you have acquired.

You will not be justified, however, in resting on the attainments you have at present. We draw the "dead line" of our usefulness where we cease to acquire more knowledge and wider experience. You must not limit yourself to your own experience, for the resources of the whole world, through the agency of books and travel are now available to everyone, to a far greater degree than ever before. By these means you can put yourselves in possession of the "facts of failure and success that have gone before and that are in progress from day to day. Determination to master and build upon such facts and their teachings characterizes the successful worker. It is a good thing to profit by one's own experience, but the one who profits by another's experience is even wiser than the one who profits by his or her own."

It will be greatly to your interest to re-visit this hospital, and to visit other hospitals so as to keep closely in touch with the progress of the day. It may be that all cannot acquire the same degree of efficiency for some are more richly endowed by nature than others, but it will be a standing disgrace to anyone who does not make the best possible use of the opportunities within her reach. "Where much is given much is also required."

Another very important part of the equipment of the trained nurse is a systematic course of post-graduate reading on subjects pertaining to her calling. On the foundation you have laid in this hospital it will be your duty to build industriously, wisely and well. Sages tell us we are practically what we are willing to be. Success in nursing, as in every other honorable calling, is never harvested from the slumberous couch of indolence.

Hitherto I have been discussing the purely scientific aspect of your equipment, but I wish now in a few words, and as emphatically as I can say them, to state that scientific knowledge and skill do not occupy the first place in the equipment of the trained nurse. These alone might make a nurse a very high type of machine, but never a very high type of womanhood. What matters it to either patient or physician the amount of knowledge or skill a nurse may possess if she be untruthful, dishonest or immoral? The virtues so tersely expressed by the old Apostle in his letter to the Phillipians, where he says, "Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report," the Christian graces, changeless in character, older than creation, enduring as eternity, these deserve the first place in the equipment of the trained nurse. Pages of closely written rules have been given to guide and govern the nurse in her relationship to patient, physician and others, but the Christian graces cover the whole of her conduct. The nurse who treasures them in her heart, and practices them in her life, will ever have the approval of her own conscience, and enjoy the confidence and approbation of the patient, the physician, and the friends.

Again, in the nurse's equipment the possession of a healthy vigorous body and an attractive personality are most important factors, and unless the very critical character of the case demands it, the nurse is not justified in depriving herself of the time necessary for recreation and rest. The waste products in the system, the effects produced by work and anxiety are of a poisonous character and if not removed by intervals of rest and change, soon vitiate the nurse's work. Under the stress and strain of too long hours on duty, both physical and mental aptitude are impaired. She becomes too exhausted and weak to change the position of the patient or arrange the clothing. She sleeps when she

should be watching. It should be definitely arranged between patient, or friends and nurse, that the latter shall have plenty of time in which to take a cold bath, combined with brisk friction of the body, outdoor exercise, and plenty of sleep, so that she can always bring to her duties a strong healthy cheerful personality.

If you will permit me I would yet briefly refer to one or two other factors in the nurse's equipment. It will be of great value to the nurse to study both from books and by observation what is technically known as child and adult life. Consciously or unconsciously child and adult are great teachers. We learn much of the character of the child from the plays he or she enjoys and the type of companion that is preferred. This knowledge is of great value in nursing children. If you study the life of the adult too, you may readily find out how your accomplishments, as a skilled pianist, or a vocalist, may act as a charm, or your ability as an elocutionist, or your wide knowledge of literature, enhance the value of your services in the estimation of the patient. The nurse's vocation is not all embraced in those arduous duties incident to the sick couch. There is the period of convalescence often as trying, if not even more so to the busy restless mortal than the illness itself. Here the value of culture and of a refined personality come into force. The nurse who can entertain her patient, in games, in dances, in songs or in literature, is contributing to the restoration of health just as effectually as when discharging the more technical duties at the bedside. But, I have trespassed too long upon your time, so will close by extending to each and all, the best wishes of the staff and officers of this hospital.

X-RAY TREATMENT OF CANCER.

The microscopic changes in the tissue, says E. G. Williams, of Richmond, Va., *Journal A.M.A.*, May 6, should be our guide as to the therapeutic possibilities in the x-ray treatment of malignant growths. It is evident, he states, that the elements of the tissues are affected according to their vitality. Dead organic matter is unaffected, and the more active the growth the greater the effect. Next to this is the accessibility of the tissues to the rays. Hence the better results with superficial or skin cancers. That moderately deep tissue can be affected is shown by experience, and the way to reach them without producing necrosis of overlying tissues is to lengthen the distance of the tube and the time of exposure. For deep growths, radical surgical measures should be recommended, as the patient should be given the benefit of the probability rather than the possibility of good results. In such cases, however, operation might be rationally followed by x-ray treatment to destroy what may remain of the malignant growth. Inoperable cases should be treated by the x-ray because remarkable results have been obtained and the most distressing symptoms of pain relieved.

UNIVERSITIES AND MEDICAL COLLEGES.

ANNUAL MEETING OF THE ONTARIO MEDICAL COUNCIL.

The Council of the College of Physicians and Surgeons of Ontario commenced their annual meeting on 5th July, by electing officers for the coming year. The retiring president, Hon. Dr. Sullivan, of Kingston, is succeeded by Dr. Albert A. Macdonald, Toronto. Dr. S. W. H. Moorhouse of London, was elected vice-president, and Hon. Dr. R. A. Pyne reappointed registrar. Dr. H. Wilberforce Aikins was again elected treasurer, and Mr. Christopher Robinson, K.C., solicitor. Mr. Charles Rose and Dr. J. C. Patton are the reappointed prosecutor and auditor, respectively. The official reporter for the council is Mr. John Downey.

The legal opinion was submitted to the council by Mr. H. S. Osler, K.C., to the effect that examinations cannot be held in London until the act is amended.

The financial statement of the Council was satisfactory, showing a reduction on mortgage loan of \$5,000, with a revenue of about \$35,000, and a balance on hand of \$5,764.92.

There was a very full and lengthy discussion on the prevention of tuberculosis. The matter came up on a resolution of Dr. W. H. Moorehouse, of London, providing for the appointment of a committee to interview the Ontario Government, and endeavor to secure a liberal grant to assist in preventing the spread of tuberculosis. The resolution met with the cordial support of the members, and the opinion was expressed that the province should lay aside a specified sum annually for this purpose.

Dr. Thornton mentioned that the sanatorium at Gravenhurst was unable to furnish accommodation for all those who sought admission; and mentioned the danger of having these cases in general hospitals along with other patients. He also emphasized the contagious character of the disease, and cited some instances. Dr. Mearns also spoke along the same lines. Hon. Dr. Sullivan stated that the Dominion Government had taken steps to aid in these efforts, and that Senator Edwards was President of the National Association for the prevention of tuberculosis. He suggested that some space be given in the school text books to the subject of sanitary science.

It was announced that a large number of doctors throughout the province were behind in their fees, and it was recommended that a notice should be sent out to the delinquents that unless the amounts owing were paid their licenses as practitioners would be revoked. The fee is \$2 per year. This matter was also referred to a committee.

The report of the official prosecutor, Mr. Charles Rose, was submitted, and was very carefully considered. It foreshadows an appeal to the Legislature to amend the code so as to expedite the prosecution of Christian Scientists, who are not particularly vulnerable under the existing Act. Dealing with this branch, Mr. Rose, in his report, says :—

“Year after year I have drawn your attention to the need of a small amendment to the penal clause of the Medical Act, as from the decisions rendered by judges of our higher courts it is impossible to secure a conviction as the Act now stands against many persons who, I consider, practice medicine, but from the fact that they do not prescribe drugs, the higher court judges have decided that it is not practising medicine. Many of those who do not give medicine, although practising the art of healing, are more dangerous to the public than he who prescribes medicine. I think it is time for the Ontario Medical Council to lay the facts before the Attorney-General, and I feel sure that if this were done he would see to it that such an amendment was passed, not in the interest of the medical profession, but to protect the public from this class of healing.”

Mr. Rose referred to the Goodfellow Christian Science case in Toronto, and gives Sir John Boyd's remarks on the subject. Then he adds :

“During the past year, we have had a number of such cases cropping up in our Police Courts in different parts of the Province, and in every instance the judge before whom the case was brought spoke strongly against this class of practitioner. There are many other kinds of sick healers of the same nature throughout the Province who give no medicine, but undertake to cure diseases in a somewhat similar manner to the Christian Scientists, and it is to such as these that the Government's attention should be directed in any amendment made.”

Mr. Rose stated that during the year complaints were registered against about 50 persons for practising medicine illegally. He also complained that a number of licensed practitioners throughout the Province employ unqualified men, and that in many cases the unqualified man is left in charge of the physician's practice. If an example of some of them were made by the Discipline Committee investigating their conduct Mr. Rose thought it might put a stop to this kind of “unprofessional work.”

Drs. W. H. Moorehouse, J. L. Bray, W. Spankie and the president, Senator Sullivan, were appointed a committee to place before the Government and the Legislature the lack of accommodation for patients suffering from tuberculosis who are unable to bear the expense of treatment in special sanatoria, having in view the danger to the public from the contagious nature of the disease.

The report of the Discipline Committee was unanimously adopted. Of 52 cases dealt with during the year, 24 convictions had been obtained, nine had left the country, eleven were dismissed, and six were not proceeded with.

The question of non-payment of fees was discussed also. Many doctors allowed their fees to lapse. It was decided that in such cases notice should be sent to those who did not pay, and if no attention was paid, their licenses should be cancelled.

The members discussed at length the legislation which they will ask the Ontario Legislature to pass with the object of suppressing Christian Science. The following was finally adopted as the clause which will be submitted :

It shall not be lawful for any person not registered to practice medicine, surgery, midwifery, or any other method of healing, or to attempt to heal, attend upon, or treat any person the subject or supposed to be the subject of disease, for hire, gain or the hope of reward.

The penalty for breaking the law is to be a fine of not less than \$25, or more than \$100.

The words "or any other method of healing," are supposed to cover the case of the Christian Scientists and the faith healers. As brought down in the report of the Legislative Committee, read by Dr. Robertson, the words read "art of healing." "Art" was changed to "method," as the Council did not wish to admit that Christian Science was an art.

Dr. Britton desired to defer the matter for a year, and to refer the whole question back to the committee for legal advice. He feared that more harm might come of haste than from delay, though he was anxious as anyone to stop fraud.

Dr. A. J. Johnston had no objection to people trying to do good if they thought themselves able. The evil lay in doing it for the hope of reward, which made the public liable to fraud. It was the pay that these people were after, and if there was no reward for it, these fake treatments would soon die out.

Hon. Dr. Sullivan and Dr. Ryan also took part in the discussion.

Anyone who "advertises to give advice or gives advice" will be dealt with in another clause of the bill which will be drawn up for submission to the next Legislature.

An amendment will be the extension to London of the examinations now held in Toronto and Kingston. The third Tuesday in November and the third Tuesday next July were set for the next year's examinations.

The first Tuesday in next July was fixed as the date of the annual meeting of the Council.

Another amendment seeks to insure the payment of all physicians' fees before an action for malpractice can be entertained. It was thought that actions were often instituted in order to escape payments of doctor's bills.

A dinner was held at the King Edward, when the Minister of Education, Hon. Dr. Pyne, presided, and the guests of honor were Hon. J. J. Foy and Hon. W. A. Willoughby.

Hon. Dr. Sullivan made application on behalf of John A. Reid, M.P., of Prescott, to permit that gentleman to take his examination before the council to qualify him as a practitioner. Mr. Reid graduated at Queen's College in 1891, but owing to the death of his father, did not appear before the council for his final examination. The matter was referred to the Registration Committee, and finally agreed that if he took his final examination he would be granted his license.

The Medical Building on Bay Street, will probably remain in the possession of the Medical Council for some time to come. The report of the property committee, presented by Dr. Johnson, said that in pursuance of the instructions given to the committee last year, tenders for the sale of the building has been asked, but nothing further was done. The year, however, had been a satisfactory one. The building was in good condition, all the offices were taken, some of them at an increased rental, and about \$10,000 had been paid on the mortgage held by the Canada Life.

A motion was made by Dr. Thornton to the effect that teachers should be appointed as examiners in anatomy, chemistry and similar subjects, as they were better able to examine in them than ordinary practitioners, who were not continually studying in these particular lines. The motion was referred to the Education Committee.

The business before the Council at its closing session was the receiving of the report of the Complaints Committee. The examiners were upheld in their decision in each instance. Upon the suggestion of Hon. Dr. Sullivan, a committee was appointed to wait on the Government, with the view of establishing a Bureau of Health. The Government will also be asked to assist in the establishment of sanatoria for the treatment of consumptives. Drs. Macdonald, Moorehouse and Campbell were appointed the Executive Committee for next year.

These official examiners were appointed:—Anatomy descriptive, Dr. T. W. G. McKay, of Oshawa; theory and practice of medicine, Dr. George Hodge, of London; clinical medicine, Dr. H. R. Duff, of Kingston; midwifery, operative and other than operative, and puerperal diseases, Dr. J. R. McCabe, of Strathroy; physiology and histology, Dr. R. D. Rudolf, of Toronto; surgery, operative and other than operative, Dr. W. T. Parke, of Woodstock; clinical surgery, Dr. J. S. McCullough, of Alliston; medical and surgical anatomy, Dr. T. H. Middleboro, of Owen

Sound ; chemistry, theoretical and practical, and toxicology, Dr. A. R. Pyne, of Toronto; materia medica and pharmacology, Dr. James S. Sprague, of Stirling; medical jurisprudence and sanitary science, Dr. D. J. Sinclair, of Woodstock; diseases of women, Dr. R. E. Webster, of Ottawa; diseases of children, Dr. James Newall, of Watford; pathology, therapeutics and bacteriology, Dr. Isaac Wood, of Kingston; homeopathic examiner, Dr. W. A. McFall, of Peterboro'.

Dr. Ryan asked if it was compulsory to always hold the meetings at Toronto, and, if not, he suggested that they might be held sometimes in other cities so as to give the members an opportunity of returning the courtesy which they always received at the hands of the council in Toronto.

It appeared that the place of meeting could be changed, but no decision was come to.

On the recommendation of the Education Committee it was decided to substitute Dr. Adam Wright's book on obstetrics for the American book on the same subject.

ONTARIO MEDICAL COUNCIL RESULTS.

The following candidates have passed the final examination:—

J. A. Alford, Ottawa; C. B. Archer, Campbellford; P. Anderson, Cornwall; R. W. Anderson, Toronto; W. G. Anderson, Thorndale.

G. M. Biggs, Toronto; H. R. Bright, Warton; E. C. Burson, St. Catharines; A. C. Bennett, Toronto; F. J. Buller, Toronto; F. J. Brodie, Forest; H. R. Bryan, Inwood; J. W. Brien, Lindsay; W. A. Burr, Toronto; W. J. Barber, Toronto.

H. C. Church, Chelsea; W. W. Chipman, Ottawa; W. S. Cody, Windsor; R. L. Clarke, Hamilton; J. C. Caskey, Tweed; G. W. Crosby, Campbellford; A. H. Caulfield, Toronto; W. K. Colbeck, Grand Valley.

T. A. Davies, Toronto; E. C. Dixon, Toronto; A. H. Davies, Delhi.

T. B. Edmison, Brighton; F. J. Ellis, Ellisville; F. S. Eaton, Free-land.

P. J. Fleming, Dundas; B. J. Ferguson, Teeswater; J. A. Faulkner, Stirling.

J. Graham, Belwood; H. E. Gage, Kingston; M. E. Gowland Zimmerman; Wm. Gibson, Emerald; T. D. Gallivan, Kingston; G. W. Graham, Toronto.

T. R. Henry, Harriston; P. J. Houston, Paisley; H. O. Howitt, Guelph; R. W. Halladay, Elgin; W. H. Harvey, Toronto; A. L. Hore, Valentia.

G. O. Ireland, Toronto.

J. L. Kane, Gananoque; N. D. Kyle, Belwood; A. Kinghorn, Toronto; J. A. Kane, Orillia; J. F. Kiloran, Seaforth; W. H. Keen, St. Mary's.

E. J. Lyon, Guelph; A. J. Lalonde, Kingston; S. M. Lyon, Barrie; B. M. Lancaster, Culloden; Eleanore Lucas, Toronto.

A. J. Manard, Belle River; A. T. Munroe, Moose Creek; T. D. MacGillivray, Kingston; W. E. Mason, Toronto; A. F. Malloy, Nobleton; P. F. McCue, Formosa; J. P. McKinnon, Hillsburg; P. McGibbon, Forest; R. J. McCulloch, Orillia; R. A. McLurg, Sault Ste. Marie; Geo. McGhie, Elgin; A. G. McPhedran, Wanstead; D. F. McKinlay, Bolton; R. J. McComb, Trenton; P. J. McCue, Melancthon; A. McNally Blair; A. W. McClennan, Toronto; C. C. McCullough, Gananoque; M. A. McQuade, Warsaw; W. E. McLaughlin, Cadmus; J. K. McGregor, Waterdown; A. G. McMillan, London.

S. M. Nagle, Almonte; J. S. Nelson, City View.

J. W. Presault, Verner.

W. G. Reive, Markham; Wm. Reid, Watford; F. W. Rolph, Markham; G. H. Richards, Melbourne; A. L. Russell, Millbrook.

A. B. Sutton, Cooksville; J. B. Stallwood, Hagersville; C. E. Spence, Toronto; F. J. Snelgrove, Toronto; A. W. Seighon, London; J. F. Sparks, Kingston; E. Sheffield, Peterboro; W. A. Scanlon, Prescott; G. M. Shaw, Niagara Falls; R. G. Snyder, Princeton; A. E. Schultz, Elmira; F. J. Sheahan, Newark.

A. Turner, London.

A. D. Unsworth, Hamilton.

K. H. Van Norman, Toronto; F. S. Vrooman, Lindsay.

A. J. Williamson, Kingston; F. C. S. Wilson, Toronto; T. A. Waterson, Manotick; B. C. Whyte, Millbrook; J. A. Wright, Toronto; S. B. Walker, Niagara Falls.

CURRENT CANADIAN MEDICAL LITERATURE.

The Canadian Practitioner, July, 1905.

THE MEDICAL TREATMENT OF EXOPHTHALMIC GOITRE.

At the recent meeting of the Ontario Medical Association, Dr. R. D. Rudolf, of Toronto, read this paper. The author of the paper contends that in this disease there is a strong natural tendency to recover, and quotes a number of eminent authors to substantiate this view. About 50 per cent. eventually recover.

The favorite theory is that the patient is suffering from too much of the thyroid gland secretion circulating in the blood; indeed, is in the opposite condition to that of myxoedema. The patient should be kept physically, mentally and emotionally quiet. The general health of these patients should be carefully watched, and anæmia, constipation, etc., corrected. The diet should be plain and good, and stimulants, also tea and coffee, had better be omitted.

Various methods have been tried of lessening the activity of the gland, including electricity and the application of cold. The employment of the thymus gland extract is useful sometimes, and this may be said of the thyroid gland extract, though it would appear to be wrong in principle. Of late it has been urged that the use of milk or blood from animals from which the thyroid gland has been removed is helpful. Some toxine is found in the blood or milk of such animals that neutralizes the excess of the thyroid gland secretion in the blood of the patient. This treatment has not been accompanied by any marked benefit.

As we cannot arrest the formation of the active principal of the gland, or neutralize it in the system, the treatment of Grave's diseases resolves itself into the treatment of symptoms. Of the many drugs that have been recommended, belladonna and the bromides are the most useful in allaying the nervousness. Digitalis and engot, on the whole, are disappointing. When there is anaemia, iron in some form may be administered. Arsenic and phosphorus have been tried, but do not appear to be of any particular value. In those cases which gradually become worse, the only remedy is that of surgical intervention.

THE SURGICAL TREATMENT OF GRAVE'S DISEASE.

Dr. C. B. Shuttleworth, Toronto, read this paper at the Ontario Medical Association. He does not advocate surgical treatment in all

cases, but quotes Osler to the effect that this is likely to be the most successful plan of treatment. Of the operations on the gland may be mentioned injections of iodine in some form, exposing the gland by incisions so as to cause atrophy, ligation of the thyroid arteries, and thyroidectomy. Operations on the sympathetic nerves have been advocated, but without becoming popular methods of dealing with the disease. The surgical treatment by thyroidectomy has been attended by fairly satisfactory results.

THE MENTAL AND PHYSICAL CARE OF CHILDREN.

Dr. Charles J. Hastings, of Toronto, in his address at the Ontario Medical Association brought forward some very important and interesting facts. He spoke of the very high death rate among children under five years of age. Only 50 per cent. reach maturity. In England there is one death in every five during the first year, in Paris one-half die before they reach four years of age, in New York 20,000 out of 75,000 die in their first year, and in Ontario 6,700 died in the first year out of 48,642. These deaths are largely due to improper care and malnutrition. Education along this line is greatly needed.

While this heavy death loss is going on year by year among the children, the Government is spending very large sums in bringing immigrants into the country. The Federal Government spending \$745,000 a year on this department alone. Among the foreigners who come to this country are many degenerates, whose children are likely to be criminals or paupers. In looking after such degenerates the United States spends annually \$200,000,000, not considering the non-productiveness of such. Last year the Dominion of Canada expended over \$500,000 on agriculture by way of distributing literature, and the improvement in stock.

It has become well known that in many large cities a very large number of children are both improperly and insufficiently fed. In New York from 60,000 to 70,000 do not get enough to eat, and in the States about 3,000,000 are underfed. This state of affairs is only too common in other large cities. In Toronto, Dr. Hastings contends, there are many who are very poorly cared for in this regard. Indeed, the children forage for scraps upon which they live as best they can. In Ontario and Toronto some good work has been done by the Government and the various Children's Aid Societies, but these efforts fall far short of overtaking the work. It is a well-known fact that mental, moral and physical degeneration go hand in hand. Everything, therefore, that causes physical deterioration tends to give rise to mental and moral perversions. The study of juvenile criminals in large cities like Chi-

cago and New York abundantly proves the close connection between physical degeneration and crime. In London there are some 60,000 children in the schools who are not physically fit to be taught. Of the applicants to enter the army, 60 per cent. are not fit.

Attention is drawn to the very great importance of medical inspection of schools. This has been introduced in some countries with the most happy results. Such an inspection does much to correct the evil effects of over-strain, and children attending school when in ill-health. Too much attention cannot be given to the disastrous results of such high nervous tension. Many children, as high as 20 per cent., are attending school and suffering severely through defective sight or hearing, or other conditions. This would be noted by a careful medical inspector.

The Dominion Medical Monthly, June, 1905.

APPENDICITIS IN RELATION TO PELVIC DISEASES AND PREGNANCY.

At the meeting of the American Gynæcological Society, Dr. A. Lapthorn Smith, of Montreal, read this paper. The author draws attention to the fact that the ancestors of the human race lived on very coarse food, and would have a long and capacious appendix. Gradually, as food became more carefully selected and finer, the appendix became smaller, and less used in the economy of digestion. Issue is taken with the opinion of Sir William Macewan that the appendix is a useful organ in the process of digestion, and the statement is made that "it is a source of danger to have one at all." The appendix is the least used organ in the body and is one of the weakest as a consequence.

If the appendix is, therefore, weak in all, it must be particularly so in the unhealthy, who are those deprived of proper food, sunshine, exercise and fresh air. This, to some extent, establishes the truth of the saying that it is the wealthy that suffer most, as they so often violate the laws of digestion, and the women do not take a sufficient amount of exercise, nor are they enough in the air and sunshine, due to sleeping late in the morning, driving in closed carriages, spending time in darkened stores, and attending afternoon teas, etc.

There is a marked tendency for the appendix to become heavy, relaxed and to drop down into the pelvic cavity, where it may become infected.

During pregnancy there are many digestive derangements, such as vomiting, constipation, deranged peristalsis and an increase in the number of the colon bacilli. Under these conditions the appendix may

become the seat of inflammation. On the other hand the appendix may dip into the pelvis and give rise to an infection of the tubes, or even cause puerperal septicæmia. It sometimes happens that the appendix is found attached to a diseased tube. The author thinks appendicitis during pregnancy is very frequent.

Dr. Smith inclines to the view that women who have had appendicitis would do well to have it removed before marriage; and if they became pregnant to submit to the operation during the first three months.

CARCIMONA OF THE STOMACH.

Dr. W. J. McCollum, of Toronto, reports an interesting case, and draws attention to the following points:—

1. Initial symptoms—Severe hæmorrhage. This occurred in the absence of any gastric symptoms whatever and without any warning. With a history of alcoholism it suggested cirrhosis of liver.

2. Absence of gastric symptoms throughout whole course of disease; patient only had two or three vomiting attacks from beginning of disease to the end. There was no flatulence or distress or pain after eating. Cancer of the stomach, when not situate at either orifice, may give rise to few gastric symptoms.

3. Early and persistent absence of free Hcl. This was found to be absent early in the disease, before any tumor could be detected, and in the absence of any gastric symptoms except a history of hæmorrhage and a loss of weight. It was certainly of considerable aid in making an early diagnosis.

4. Though frequent test meals were given lactic acid was never detected, nor was the Oppler-Boas Bacillus. The explanation of the absence of lactic acid is probably the absence of stagnation in the stomach, due to no pyloric obstruction.

The Montreal Medical Journal, June, 1905.

THE INSANE IN CANADA.

This article is the Presidential Address of Dr. T. J. W. Burgess, of Montreal, to the American Medico-Psychological Association. He first takes up the evolution of the Canadian asylum system. It is pointed out that in 1639 the Hotel Dieu of Quebec was founded and in 1643 the Hotel Dieu of Montreal. In the early days of the country, workhouse was good enough for the insane person if harmless, and the prison, if dangerous. New Brunswick was the first province to make

provision for the insane, in 1835, the movement being set on foot by Dr. George P. Peters, of St. John. In 1836 the Government of Upper Canada, now Ontario, appointed a commission to report on the matter of the care of the insane. In 1841, the jail at York, now Toronto, was opened for the reception of lunatics. In 1850, under the charge of the late Dr. Joseph Workman, the patients were removed to the asylum on Queen Street, Toronto. In 1856, the Kingston, or what is known as the Rockwood asylum, had its birth-place in the stable of the Cartwright mansion. The present building was erected in 1862. The London Asylum was the next. In 1859 it was established in the old military barracks, and in 1870 was located in the present institution. In Quebec, Beauport, or Quebec Asylum, was founded in 1845. In 1852 Longue Point Asylum, or L'Hospital St. Jean de Dieu came into existence, and in 1890 the Verdun, or Protestant Asylum was founded. There are in addition the Hospice St. Julien and the Baie St. Paul Asylum, both of which admit idiots. In Prince Edward Island the asylum dates from 1847; and in Nova Scotia from 1858. In Manitoba, the first asylum was opened in 1871 at Fort Garry. It is now at Selkirk. The second was started at Brandon in 1891. The asylum for British Columbia began in 1872 at Victoria, but is now at New Westminster. All the asylums in Quebec are the result of personal benevolence. They are not maintained by the province.

A strong protest is raised against this condition of things in Quebec. The insane should not be handed over to private institutions to care for them. Before things can be considered satisfactory in Quebec, the province must provide adequate accommodation for this class of sufferers. The paper condemns the system of county asylums as met with in Nova Scotia; and especially the combination of a county asylum and poor-house. In New Brunswick there is some fear that this system may be introduced. In that province, a patient may be committed on a line from a doctor. This is not sufficiently protecting the liberty of the patient. At the present, Ontario takes the lead, the asylums being state institutions and most of the patients maintained at the expense of the province. In Manitoba and British Columbia the asylums are also state institutions.

Attention is directed to the increase in the numbers of the insane. In 1891, there were 13,342 in a population of 4,719,893; and in 1901, 16,622 in 5,318,606. This shows an increase of 25 per cent. in the insane and only 13 in the total population. The cause of this increase is doubtless due to modern methods of life and the race for wealth. High-pressure civilization brings its woes. Any hereditary taint is intensified by these conditions. It is further stated that the utmost care be taken with regard to immigrants, not to allow degenerates to

enter the country. Among the native Canadians there is one insane person to every 339, but among the foreign element there is one to every 243. In the prevention of insanity in Canada one of the first things to consider is the keeping out of an undesirable foreign population.

Among the requirements of the present, the following points are mentioned: "Separate accommodation for idiots, epileptics, inebriates and the criminal insane; proper means for the segregation of the tubercular; some provision for the temporary relief of friendless convalescents; and the abolition of political patronage in asylum affairs." The public should undertake the care, training and education of the mentally defective. Custodial care is not enough. They should not be allowed to grow up without as much education as can be imparted to them. Proper occupation is the essential in the treatment of the epileptic; and the criminal insane should not be housed along with the rest of the insane. The writer of the paper puts in a strong plea for more attention to the treatment of inebriates, and thinks that Canada is behind in this matter. The article concludes with a scathing attack upon political interference in the management of asylums, and the evils of the "spoils system."

BONY OCCLUSION OF THE POSTERIOR NARIS.

Dr. H. S. Birkett, of Montreal, reports two very interesting cases where one posterior naris was occluded by bone. Under anæsthesia, the bony partition was perforated by an electrical dental drill. The opening was maintained by iodoform gauze. These cases did well.

CARCINOMA OF THE TONGUE.

Dr. G. E. Armstrong, Montreal, reports a number of cases of cancer of the tongue. The disease is a local one at the start. Among the causes he mentions injuries, irritation, smoker's patches, gummata, syphilitic ulcers. Early diagnosis is of the utmost importance. Dr. Armstrong remarks that recurrence generally takes place on the same side as the disease began on; and, therefore, that it is usually well to remove only that side of the tongue. This form of operation has a lower death rate and adds much to the patient's comfort. As recurrence takes place about the tonsil or in the glands of the neck, there is no good in removing the entire tongue, except in some cases. When the diagnosis is not made early in the disease, a very radical operation must be performed, and an extensive amount of tissue removed. He mentions a case where he removed the entire tongue, the floor of the mouth, and the glands of the neck to the bifurcation of the carotids. After seven years there has been no return.

The Maritime Medical News, June, 1905.

SOME AFFECTIONS OF THE FEET MET WITH IN PRACTICE.

Dr. Arthur Birt, of Berwick, N.S., contributes a paper on some affections of the feet. The first subject taken up is that of flat feet. In this condition the sufferings of the victim may be very great, consisting of pains in the feet, legs and back. The walk is also impaired, the leg not being fully extended, the foot everted and bulging of the shoe inward. Careful means should be taken to brace up the foot with proper supports, and also to strengthen the weak muscles by massage, exercise and hydro-therapeutics. The patient is taught to throw the weight on the outer side of the foot, hold the feet parallel in walking, and to cultivate the leverage action of the great toe by pressure down the sole of the shoe in walking.

Congenital equino-varus is another troublesome condition. When seen early, the deformity may be corrected by manipulation and massage. Three or four times daily the foot is grasped in front and above the ankle, and the deformity forcibly corrected and the sole of the foot brought well down. When the child is older it is necessary to correct the deformity by force and place the foot and lower portion of the leg in a plaster cast. This may have to be repeated a number of times. A few months of this treatment does a great deal of good. A club-foot brace may be required.

Metatarsal neuralgia, or anterior metatarsalgia, is another very annoying affection of the foot. In these cases a very violent pain attacks the foot while the person is walking. Massaging the foot and broadening out usually relieves the attack. In these cases of Morton's disease there is breaking down of both arches of the foot, hallux valgus with bunion, depression of the fourth metatarso-phalangeal joint with over-riding of the adjacent joints, callosities on the sole of the foot over the third and fourth joints, and tenderness over the fourth. Compression of the anterior part of the foot causes pain. Goldthwaite, of Boston, has shown that this condition is due to a weakness in the anterior metatarsal arch. Much improvement can be effected by banking up the sole of the shoe, broadening its sole, and slightly raising the inner side of the sole and heel. A metal or celluloid sole-plate, constructed on a model of the foot, is the best form of support, elevated a little at the point of the depressed joint.

With regard to ingrowing toe-nails, the plan of treatment is as follows, first laid down by Chiene, of Edinburgh. The toe is carefully disinfected, and constricted by a rubber band. A flap of integument is cut out extending beyond the matrix of the nail. The pointed blade

of a pair of scissors is thrust under the nail for its entire length and the edge of the nail divided. This portion is then grasped by a pair of suitable forceps, taking up all the cut tissue as well as the nail. Every portion of the matrix must be removed. The wound is then treated with an antiseptic dressing lightly applied.

Hammer toe is one of troublesome conditions of the foot. In some cases it may be cured by forcible correction, by this combined with subcutaneous cutting resisting tissue, by amputation, or by the wearing of a splint devised by Dr. Thomas, of Birmingham, and called the "Tomatoe." Resection of the toe-joint may be required.

Angioneurotic oedema is a vaso-motor disturbance, and is best treated by hygienic and general health measures along with electricity.

APPENDICITIS AND ITS TREATMENT.

Dr. G. D. Turnbull, of Yarmouth, N.S., discusses at some length this subject. In the article the writer contends that the treatment of this disease as laid down by Ochsner is the best. Dr. Ochsner holds that peristalsis can be inhibited by giving no form of food or cathartic by mouth, and by employing gastric lavage to remove the existing food or mucus from the stomach, the patient being nourished by nutrient enemata. In all chronic recurring cases the appendix should be removed during an interval.

Acute cases should be operated upon within the first 48 hours, if possible, before the general peritoneal cavity becomes infected. In cases where the infection has spread beyond the appendix, the above method of feeding should be followed until the condition of the patient improves. When no operation is performed, neither nourishment nor cathartics should be given until the patient has been freed of pain. Dr. Turnbull thinks that the moderate use of opium is valuable in arresting peristalsis and in allaying the shock of the abdominal nerves. The patient is made comfortable, and as the opiate aids the starvation treatment in arresting peristalsis, there can be no objection to its moderate employment. The writer thinks that a combination treatment of the medical and surgical as outlined should bring the death rate down to 2 or 3 per cent.

The medical profession of New Brunswick is again moving in the direction of a sanatorium for consumptives. The St. John Medical Society has appointed a committee to undertake the very important work of collecting information and getting the question properly brought before the people. It is hoped that the government will act in the matter at an early date.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

LIMITATIONS OF SERUM THERAPY.

In *The Medical Record*, May 6th, Berg discusses the necessary limitations of serum therapy in our present state of knowledge. The pathological bacteria, which have been identified with specific infectious diseases, may be divided into three groups, according to their toxin-producing qualities :—

First, those bacteria which produce in living cultures outside of the body, best shown in fluid media, as a free secretion, a virulent real toxin. The chief members of this group are the diphtheria and tetanus bacilli. A subsidiary member is *B. pyocyaneus*.

Second, those bacteria which secrete little or no free toxin in living cultures, but do contain a powerful toxin, known as an endotoxin (Buchner-Oppenheim) in the living bacterial cell, which is partly set free only upon the death and disorganization of the bacterial cells. To this class belong by far the largest number of known pathogenic bacteria. Good examples are the pneumococcus, the typhoid bacillus, the streptococci, etc.

Third, those bacteria that produce no free toxins, nor have in the bacterial cells endotoxins of any power, but in which the cell plasma contains other poisons in addition to the protein poisons which all bacterial cells in common contain. For our purpose the most important member of this group is the tubercle bacillus.

It is in the first of these divisions that our most successful advances have been made, while in the third practically no discovery of therapeutic value is recorded. The limitations of the first or the use of antitoxic serums are :—

(1) That the bacteriological cause of the disease must be positively identified and known.

(2) That it must be an organism which produces a free specific toxin, and virulent enough to be effective in the immunization of animals.

(3) That the experimental injection of the antitoxic serum in sufficient quantities be successful in saving animals from death when injected with or immediately after a fatal dose of the toxin specific to the organism.

(4) The bacterial cause and its toxin being both specific, the specificity of the action of the antitoxic serum follows as a natural sequence and must be recognized.

(5) The combination between toxin and antitoxin being a chemical one, there must be an absolute quantitative relation between the amount of toxin injected and the quantity of antitoxin required to neutralize it.

(6) That the antitoxin, when used for curative purposes, must be injected before the union of the toxin with animal cells, has become sufficiently firm to cause pathological and destructive changes in the body cells tissues and organs. For the antitoxin only antagonizes and neutralizes free or partly free toxin. The time element is, therefore, of importance in antitoxic serum therapy.

In the second, much experimental work is being done; and advances in our knowledge of disease may be confidently expected along this line. It will be found that the following limitations will bar some of the supposed discoveries of specific agents.

(1) The bacteriological cause of the disease must be positively identified and known.

(2) The experimental injection of the bacteriolytic serum in sufficient doses must be successful in saving animals from death when injected with or immediately after a lethal dose of a living corresponding bacterial culture.

(3) The bacterial cause of the disease being specific, the specificity of the bacteriolytic serum follows as a natural sequence.

(4) Since the antiserum has a destructive or bacteriolytic action upon the pathogenetic bacteria, their action being dependent upon the combined presence of two known substances, namely, the alexin or complement an unstable substance (present in the normal living body and in fresh serum) and the immune body (present in bacteriolytic sera), and since only a small amount of the alexin is present in the body, in quantity sufficient to produce only a very limited bacteriolysis, it follows that unless the antibacterial serum be freshly drawn, thus securing the unchanged alexin present in the blood of the immune animal, the antimicrobial action of the bacteriolytic sera is limited by an insufficient amount of alexin present in the body of the patient. Wasserman, recognizing the impossibility of having the bacteriolytic sera freshly obtained for each case, advises for this purpose the injection of the fresh serum of non-immunized horses or oxen in addition to the anti-serum itself. This recommendation, however, can hardly, for obvious reasons, be considered as having solved the problem.

Under all circumstances it is absolutely necessary that the bacteriolytic serum be fresh.

(5) The bacteriolytic sera have a quantitative relation to the amount of bacteria which they can destroy. At best the antisera protect only against a limited amount of bacterial infection. When this increases beyond a certain figure no amount of anti-serum will protect or cure the animal. Hence very large doses are necessary, sometimes repeated. Thus

the antistreptococcus serum is used in doses of 150 to 250 c.c., repeated if symptoms do not improve.

(6) While enthusiasts might claim that the bacteriolytic action of the antisera seen in animals which are the subject of experimental infections occur also in patients suffering from infectious diseases, no curative effect can possibly occur with regard to pathological changes which have already been produced by the bacterial infection. So that the later the antiserum is used the less the chance of its having any curative effect.

MYXEDEMA FOLLOWING EXOPHTHALMIC GOITRE.

N. B. Foster reports this case, and says that these cases of myxedema following exophthalmic goitre are rare enough always to excite interest. This patient, a woman 57 years old, declares that until 1887, she had always enjoyed good health. At this time she returned from South America and she noticed that her neck was considerably swollen. She was extremely "nervous," and her eyes were "swollen." She was told that she had a goitre. Over a year ago she noticed that her skin was very dry and came off in fine scales; her hair was dry and became very itchy. She became "puffy" all over. Her memory became defective. She vomited several times a day clear mucus, which had an extremely offensive odor. On presenting herself to the writer for treatment, the thyroid gland could not be felt. The pulse was regular, 100 to the minute. The patient was put on a thyroid extract, in addition to general tonic treatment. Improvement was very slow, but after two months she left the hospital, far from well, however. It seems that she is now as well as she will ever be, but she is doomed to drag out a miserable existence. It is evident that there is another element in this type of myxedema besides deficiency of thyroid function, or else the administration of the gland extract would produce better results.—*Am Journal of Med. Science by Med. World.*

AN EMERGENCY POISONING CASE.

In *The Medical World*, May 6th, 1905, Dr. Wainwright, of New York, makes a useful suggestion that physicians should provide themselves with a case for use in emergency poisoning cases to prevent loss of valuable time from lack of proper equipment. He has one made to his specifications as follows:

The case is compact and handy, neatly finished in black leather, with a substantial handle. Its outside dimensions are 12 inches long, 4 1-4 inches wide, and 6 inches high. The contents are as follows: One stomach

tube, one tongue forceps, one mouth gag, one 2-oz. glass syringe, one hypodermic syringe. It also contains large bottles of magnesium sulphate, of zinc sulphate in 20-grain powders, powdered mustard, calcined magnesia, and chloroform. The 1-oz. vials contain amyl nitrite, alcohol, iron dialyzed, acetic acid, oil of turpentine, and aromatic spirit of ammonia. The 1-2-oz. vials contain powdered ipecac, powdered opium, potassium bromide, chloral hydrate, potassium permanganate. The hypodermic tablets are of strychnine sulphate, morphine sulphate, pilocarpine muriate, apomorphine hydrochlorate, nitroglycerin, digitalis, and atropine sulphate.

It is believed that this emergency poisoning case contains practically all the essential means for carrying on a successful fight against the effects of poison in the human system.

The case also contains a manual on acute poisoning, giving special symptoms, simple tests, chemical antidotes, physiological antagonists, and treatment.

ANTIPYRETIC TREATMENT BY EVAPORATION.

In *The British Medical Journal*, April 8th, a suggestion comes from Dr. Henry, of Melbourne, for a somewhat novel method of lowering the body temperature in febrile cases, to obviate the work of baths.

The patient's bed is covered with some waterproof, over which is placed a sheet of towelling, on which the patient reclines, covered by a similar sheet. A cradle is now placed over the bed to the dome of which is attached a small electric revolving fan, surrounded by a wire cage; while affixed to the cradle is a small rose through which water slowly sprays, in fine droplets, on to the towelling covering the patient. The fan causes evaporation and hence cold, which can be varied by varying the rate of the fan.

A CASE OF STRYCHNINE POISONING IN A CHILD.

Dr. Pooler reports in *The B. M. J.*, April 8th, a case in which a child, aet 8, under treatment for post-diphtheritic paralysis for some time with a medicine containing M.V., Lig. strychninæ hydrochlor. to the dose, was given a dose so large as to contain about 45 minims or between 1-2 and 1-3 of a grain of the drug. The symptoms appeared in about five minutes, and it was two hours and a quarter before medical aid was procured. Zinc sulphate, grs. xxx, was given, and strong tea, the stomach was washed out and emesis established. The child, though collapsed,

recovered and in two days was running about as usual; this recovery was to a great extent spontaneous, for the fits had ceased before treatment began. Doubtless the immunity derived from a lengthy course of treatment was a factor in preventing a fatal result.

IRON ACETATE IN THE TREATMENT OF PNEUMONIA.

In *The B. M. J.*, April 15th, there is an article by Robson, of Leeds, on the treatment of pneumonia by iron acetate, a method he has used with success for years. The prescriptions he uses are R. Liquor, ferri perchlor M XV., liquor ammon. acetat, ʒr. ii; aq. chloroform ʒss (adult dose.) Take every four hours in water when given alone; take every six hours alternately with the strychnine mixture, when this latter is needed. R. liquor strychninæ, m.v.; aq. chloroformi ad ʒss ft. mist. Take every six hours, alternating with the above. This treatment is kept up till well over the crisis. He never uses quinine or antipyretics, and rarely uses digitalis; but finds this treatment adequate to most cases with a special value in severe broncho pneumonia, occurring in infants or children; and in catarrhal and lobar pneumonia, occurring in debilitated subjects.

ACUTE FATAL PNEUMOCOCCUS PLEURISY, RESEMBLING CLINICALLY ACUTE LOBAR PNEUMONIA.

In *The Glasgow Medical Journal*, May, Steven reports a case of acute fatal pleurisy due to the pneumococcus, which simulated lobar pneumonia very closely.

The patient was an active, healthy young man of 29, taken ill with a severe pain in the right side, slight dry cough, temperature 102 degrees, tubular breathing and deficient resonance behind. The symptoms persisted with increasing dulness, pain became less, respirations 35; a sudden change showed itself on the fifth day, pulse weak and 140, respirations 50, temperature 104.5, unconscious. A pint of turbid, yellow fluid was drawn off from the right pleural cavity. The patient became weaker and died, apparently from toxæmia. From the fluid, cultures showed pneumococci.

The interest in this case, of such fatal pleurisy, is its resemblance, up to the last, to lobar pneumonia. It is of a type which, according to the literature, is very rare, and seems to be an argument in favor of considering the disease as a septicæmia, rather than as an acute specific fever.

CEREBRO-SPINAL MENINGITIS FOLLOWING SCARLET FEVER

In *The Glasgow Medical Journal*, May, M'Kenzie, of Ruchell Fever Hospital, reports a case of this rather uncommon sequence.

When the patient came under observation, he was recovering from the symptoms incident to a scarlet fever infection. After a month's undisturbed convalescence, during which desquamation was fairly profuse and typical, he was allowed up. On the third day after getting up, he was seized with headache, sore throat and fever, accompanied later by an erythematous, scarlatiniform rash, and, later still, by a septic rash. The throat infection was severe, and characterised by great oedema and tonsillar ulceration, and, in the swab there was found abundance of short-chained streptococci; associated with the throat condition, there was cervical adenitis, double otorrhœa, and joint pains. At the end of a fortnight, the temperature had begun to settle and there was such an amelioration of his condition as to justify a hopeful prognosis. The temporary improvement was immediately followed by symptoms pointing to a cerebro-spinal complication, and suspicion was confirmed by examination of the cerebro-spinal fluid. This began four days before his death, with vomiting, pain in the back and limbs (not related in joints). Kernig's sign appeared on the third day and he became rapidly weaker, with great restlessness.

The post-mortem showed a purulent pial infection at the base of the skull, with infiltration, congestion and pressure results, but no interruption of continuity of the dura nor connection with the sinuses. In the cord there was a general, purulent infiltration of the pia and arachnoid. Smears showed abundance of staphylococci and streptococci. No growth was obtained from cultures from the lateral ventricles, the blood was not tried, and examination of the liver and spleen failed to show the presence of micro-organism. The substance of the cord was not affected, though there was dilatation of the vessels. The nerves showed within the spinal membranes, some round-celled infiltration of the sheaths; but this extended no further.

In this case the infection was probably from the throat, by the blood or lymph channels; and, while clinically it might have been regarded as merely an "anginose" attack, the post mortem findings prove its meningeal character.

ACUTE EPIDEMIC DYSENTERY.

Lawrence B. Pilsbury, Lincoln, Neb. (*Journal A.M.A.*, July 15, 1905), reviews briefly the history of the study of the dysentery bacillus. He calls attention to the cultural characteristics of the bacillus as described by Shiga, and reviews the bacteriologic reports of various investigators. He gives the results of investigations made with the Shiga bacillus and with the *Bacillus dysenteriae* of Flexner. The article includes a summary of 237 clinical cases.

SURGERY.

Under the charge of H. A. BEATTY, M.D., M.R.C.S., Eng.
Chief Surgeon Canadian Pacific Railway, Ontario Division ; Surgeon Toronto Western Hospital.

SURGICAL SHOCK AND COLLAPSE.

T. P. Lockhart (*Lancet*, April 1, 1905) says that surgical shock is a condition produced by exhaustion of the vasomotor centers and the resulting great fall in blood-pressure. Collapse is a similar condition caused by lowering of the blood-pressure from hemorrhage or paralysis of the vasomotor centers. In surgical operations shock most frequently results from operations upon the abdomen, the most important factors in its causation being injury to or exposure of the peritoneum, the length of the operation, injury to organs richly supplied with nerve fibres, as the stomach, uterus, and kidneys, evisceration, and extensive and prolonged manipulations. In operation upon parts other than the abdomen the most important factors in causing shocks are injury to large or important nerve trunks or injury to parts richly supplied with nerve endings, the area of the wound, the time of exposure of the tissues, and hemorrhage.

Another important factor in the causation of shock during surgical operations is the anesthetic. Ether and the C. E. mixture are the best anesthetics for cases where there is danger of shock, chloroform, on account of the fall in blood-pressure which follows its administration, being very unsuitable for such cases. The time occupied in performing the operation is always an important factor, more especially in old people and children. The condition of the patient prior to operation is important, especially as regards the condition of the nerve centers. In the treatment of shock stimulants, and especially strychnine, are absolutely contraindicated, as they tend to increase the severity of the condition and to retard recovery. Shock can be produced in an animal by the administration of strychnine alone, and it is as reasonable to treat shock by injection of strychnine as it would be to attempt to cure a dying horse by kicking it. The position with the head down and the foot of the bed raised is of considerable value in the treatment of shock, and should be more extensively used.

Compression of the abdomen either manually in an emergency or by application of a tight abdominal binder is a most effectual method of treating shock in all cases. The establishment of an artificial peripheral resistance by the application of external pneumatic pressure affords an absolutely certain method of maintaining the blood-pressure, and though not at present a practical method should some day prove of great value. The intravenous infusion of salt solution or physiological serum will raise the blood-pressure in all degrees of shock. As a method of treat-

ment in shock it is disappointing, as its action is fleeting and it cannot be continued indefinitely. In the collapse of severe hemorrhage it is effectual and lasting in its effects. The introduction of saline solution into the abdomen at the end of an abdominal operation is a valuable method of combating shock, and is not contraindicated by the presence of pus in the abdominal cavity.

One of the most effectual methods of treating shock that we possess is by the administration of drugs such as adrenalin and ergot, which raise the blood-pressure by increasing the peripheral resistance independently of the nerve centers. The treatment of shock by the administration of these drugs is as yet in its infancy, and only a small number of cases have so far been treated in this way. The experimental evidence is, however, very complete, and the few clinical cases where these drugs have been used are very encouraging. The use of these drugs instead of the stimulants which are now so popular, but which have been shown to be useless, will probably result in many lives being saved.

PENETRATING WOUNDS OF THE ABDOMEN.

In a recent paper, M. L. Harris discusses this subject and comes to the following conclusions:—

1. In penetrating wounds of the abdomen. there are absolutely no known symptoms which indicate injury to any of the viscera, except in the case of wounds in connection with the urinary tract, stomach, and occasionally the lower bowel.

2. Except those relating to general shock, all symptoms following such wounds indicate either internal hemorrhage or peritonitis.

3. To wait for symptoms of perforation of the intestine means to wait until peritonitis has developed therefore.

4. Every bullet or stab wound which penetrates the abdominal cavity should be operated on at the earliest possible moment in order to anticipate the advent of peritonitis.

5. No time should be wasted in attempting to demonstrate the presence or absence of intestinal perforation by such means as the rectal insufflation of gases or vapors, or the analysis of recollected intraperitoneally injected air or liquids.

6. It is essential to systematically examine the entire gastro-intestinal canal in all cases, regardless of the point of entrance of the wounding body.

7. Whenever the alimentary canal has been perforated, suitable drains (the author prefers the so-called cigarette drains) should be placed either through the operative incisions or counter-incisions, as may appear best suited to the individual case.

INJECTIONS IN GONORRHOEA.

R. Lucke, in *The Antiseptic*, states if gonorrhoea attacks the posterior portion of the urethra within 14 days of the onset, the patient has almost certainly had previous attacks. In the first attack posterior urethritis seldom occurs before the third week. In treatment a distinction should be made between first and second or subsequent attacks. In a first attack it may safely be assumed that the mechanism by which the posterior urethra is normally excluded from the anterior is reliable. Injections under considerable pressure may be given with advantage during the first 14 days; inflammatory symptoms subside and the gonococcus is mechanically removed from the surface of the mucosa. If the solution employed is of sufficient bacterial power the occurrence of posterior urethritis is usually prevented. Protargol is the most generally useful drug, though in cases with very acute inflammatory symptoms antiphlogistic remedies, such as sulphate of thallin, should inaugurate the treatment.

In cases of recurrent gonorrhoeal infection, or of a first attack, which is not seen until the third week of the disorder, it is always doubtful whether the compressor urethrae is competent, and in the early stages injections under pressure should be avoided. The anterior urethra may be irrigated through a catheter, or irrigation with permanganate of potassium by Janet's method may be tried. If circumstances do not permit of irrigations, injections may be given, but the posterior urethra should be shut off by pressure on the bulb and no retention of the injection by compression of the external orifice of the urethra should be attempted. When the discharge has become scanty and no longer contains the gonococcus, *i.e.*, when the organism has been removed from the surface of the urethral mucosa,, injections of strongly bactericidal solutions, such as protargol, are indicated, and should be continued until cure is effected; usually for about four weeks.

MY CHANGES OF VIEW IN APPENDICITIS WORK.

R. T. Morris says that although formerly he used to forbid morphine altogether his views on the subject have changed and he now gives it cautiously in cases in which there is great restlessness. The drug is still regarded as a double-edged sword, however. Both gauze packing and iodoform gauze have been abandoned altogether, as well as the use of buried sutures of silkworm gut. A standard length of one and one-half inches for the incision has been adopted for nearly all instances, including cases of abscess and peritonitis, and it has been found safer to deal with adhesions by touch than by sight. The time limit has also been

greatly reduced, and now it is common to have the time from the first incision to the last suture occupy not more than seven to eight minutes. All patients are operated, even if moribund, a preliminary infusion of salt solution being given; adhesions are freely separated if necessary but not otherwise, and the idea of flushing out the abdomen has been dropped. After eliminating the features which seemed to have a special death rate of their own, viz., gauze packing, iodoform gauze, long incisions, and the expenditure of time in unnecessary detail of work, one hundred consecutive operations were published with a two per cent. death rate: The author does not favor the removal of the normal appendix in the course of other operative work, and he now uses a cigarette drain in all cases in which pus or septic debris have been left in the peritoneal cavity. The dictum of operating as soon as the diagnosis is made holds good, with certain exceptions, but it is still a question what to do with patients who are convalescing from the attack. In interval cases it now seems best to operate only when on palpation the appendix is found to be the definite seat of chronic infection or of adhesions which cause symptoms.—*Medical Record*, May 27, 1905.

EXAMINATION OF THE RECTUM AND ITS VALUE IN DIAGNOSIS.

C. J. Drueck speaks of the lack of thoroughness displayed by the average practitioner in handling patients with rectal disorders. These diseases are very common, yet they are often treated without any examination at all, or with only a very cursory one. The author considers the matter in detail, first discussing the subject of taking the history of a patient suspected of having a rectal malady, and a copy of a suitable record form is given. The preparation of the patient for examination by means of anemata, etc., the question of tables and illumination, and examination by inspection, are considered at length. It is stated that digital examination is the most important of all methods, as 80 per cent. of all rectal cases may be diagnosed in this way and the other 20 per cent. by the history and an examination with the speculum. The technique of digital examination is described in full, and in speaking of instrumental methods the author says that the probe has no place in the diagnosis of rectal diseases, and very little in the treatment, except in fistula. In conclusion Drueck says that rectal surgery especially interests doctor and patient, because it can be done in the office under local anesthesia, and the results of careful work are both positive and prompt, so that it is advantageous to devote greater attention to it.—*Medical Record*, July 15, 1905.

GYNAECOLOGY.

Under the charge of S. M. HAY, M.D., C..M. Gynaecologist, Toronto Western Hospital, Consulting Surgeon Toronto Orthopedic Hospital.

DIFFERENTIAL DIAGNOSIS BETWEEN ENDOMETRITIS, ABORTION AND TUBAL PREGNANCY.

DUDLEY in his latest edition of "Principles and Practice of Gynæcology," says :—

The membranes thrown off in the form of dysmenorrhœa (Exfoliative Endometritis) closely resemble, in gross appearance, those of early abortion and tubal pregnancy. The differential diagnosis between these conditions is, therefore, important :—

Exfoliative endometritis.	Early abortion.	Tubal pregnancy.
1. No history of pregnancy.	1. History of pregnancy.	1. Atypical history of pregnancy.
2. Dysmenorrhœa pain and discharge of membrane at each menstrual epoch.	2. Discharge of membrane with pain at time of abortion.	2. Discharge of decidua membrane usually between the fourth and ninth week of pregnancy
3. No enlargement of uterus or Fallopian tube.	3. Enlargement of uterus but not of Fallopian tube.	3. Enlargement of Fallopian tube on affected side.
4. Chorionic villi and amnion present.	4. Chorionic villi and amnion present.	4. Absent from uterus, chorionic villi and amnion in Fallopian tube.
5. No foetus.	5. Foetus discharged from uterus.	5. No foetus discharged from uterus.
6. Membrane may be exact cast of endometrium, or may be in shreds.	6. Membranes may envelop foetus and may be cast off whole or may be in fragments or shreds.	6. Membrane, not associated with foetus, cast off entire or in irregular fibrous fragments.
7. Usually incurable.	7. Self-limited, or curable by treatment.	7. Not incurable.

DIFFERENTIAL DIAGNOSIS BETWEEN PREGNANCY AND MYOMA.

DUDLEY gives the following valuable tabular statements on differential diagnosis.

Pregnancy.	Myoma.
<ol style="list-style-type: none"> 1. History of pregnancy. 2. Uterus soft and elastic. 3. Consistence varies with uterine contractions. 4. Cervix soft. 5. Regular and uniform increase in size of uterus. 6. Later, ballottement, foetal heart-tones. 7. Palpation of foetus. 	<ol style="list-style-type: none"> 1. Absent. 2. Usually irregular in form, harder. 3. Uterine contractions not marked—very important sign. 4. Hard, or not so soft. 5. Growth slower and irregular. 6. Absent. 7. Palpation of myoma.
Hæmatocele.	Myoma.
<ol style="list-style-type: none"> 1. History of tubal pregnancy. 2. Sudden appearance, shock, severe pain, and evidence of hemorrhage. 3. Consistence of mass usually soft, later may be hard. 4. Not sharply outlined. 5. Later, mass shrinks and becomes harder or may suppurate. 	<ol style="list-style-type: none"> 1. Absent. 2. Absent. 3. Usually hard. 3. Sharply outlined. 5. Commonly increases in size; may decrease after menopause.
Chronic metritis.	Myoma.
<ol style="list-style-type: none"> 1. Uniform enlargement. 2. Uniform hardness. 3. Uterus not larger than two or three times the normal size. 	<ol style="list-style-type: none"> 1. Enlargement usually irregular. 2. Uterus softer than tumor. 3. Size may increase to thirty or forty pounds.

INFLAMMATORY DISEASE OF THE UTERINE ADNEXA AND ITS TREATMENT.

H. Grad first considers the anatomy of the adnexa, the etiology of inflammatory processes in this region and their pathology and relation to pelvic abscess and peritonitis. The symptomatology and course of acute and chronic salpingitis are then elaborated and the question of diagnosis is taken up. In this connection, the subject of ectopic pregnancy is discussed, a condition which not only frequently enters into the diagnostic possibilities but also may be a sequel of a previous tubal inflammation. Considerable space is given to the subject of treatment, and the exposition of the palliative methods is very full. The author believes that this is very important, as the natural termination of these lesions is in resolution and cure, and he says that procrastination in operative measures and judicious persistence in general treatment is to be strongly urged. The use of opiates requires especial care in order not to mask the symptoms, and yet not permit the patient to suffer needlessly. Local treatment may or may not be necessary, and antiseptic applications and irrigations with liberation of pus and absolute cleanliness are the keynote in the treatment of the various lesions of the urethra, vulva, vagina, and cervix. The operative treatment in acute and chronic cases is then described, the author calling attention to the danger attending radical operation during the acute exacerbations, which he terms a questionable procedure. Vaginal drainage will usually bring about a cessation of symptoms with improvement in the patient's condition. The technique of pelvic operations is treated at length, special stress being laid on the matter of conservative measures and their advisability when possible. Vaginal section by a T-shaped incision is commended for use in suitable cases.—*Medical Record*, June 3, 1905.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the charge of D. J. EVANS' M.D., C.M., Lecturer in Obstetrics, Medical Faculty, McGill University, Montreal.

GONOCOCCUS INFECTIONS IN CHILDREN.

Lately considerable attention has been attracted to the virulence of gonococcus infections in children's institutions. A recent article by Dr. L. Emmett Holt, *N.Y. Med. Jour.* and *Phil. Med. Jour.*, March 18th, 1905, *et seq* is a careful report of his experience with these infections, and is of great importance to those in charge of such institutions.

The article is based on a brief account of the gonococcus infections in the New York Babies' Hospital. From 1894-1898, there was an average of about nine cases of gonococcus infection per year. These

took the form of vaginitis and ophthalmia chiefly, though in 1896, the first case of arthritis developed and died of meningitis. In 1899, the infection became epidemic. Three cases of vaginitis were admitted to a summer cottage in the beginning of June, eight others were admitted during the summer, and 15 girls contracted gonococcus vaginitis, all being inmates of the same cottage. Every care was taken to prevent the spread of the disease without avail. Separate nurses were provided for infected cases, and all napkins were boiled and disinfected. The napkins from the infected cottage were laundried separately from the others.

The type of disease was moderately severe. Profuse, yellowish-green muco-pus discharge from the vagina marked each case. No case of ophthalmia developed. In 1901, sixteen cases of vaginitis were received and 22 developed in the wards; eight cases of ophthalmia were admitted, and three cases acquired.

In 1902, three cases of multiple gonococcus arthritis developed, one in a male aged two and a half months, and another in a female infant of one year, without vaginitis. None of the three had ophthalmia.

No port of entry was discovered. In all cases the diagnosis was confirmed by withdrawing pus containing the gonococcus from the infected joints.

In 1902, the Baby Hospital moved into their model new building, but even here infection broke out and was as difficult as ever to control. In the first six months in the new hospital, from five cases admitted there developed 29 cases of vaginitis, and eight cases of gonococcus arthritis. In 1903, ten cases of vaginitis were admitted, 55 acquired; one case of ophthalmia admitted, one acquired; two cases of arthritis admitted, ten acquired.

The larger number of cases of vaginitis in the later years is probably the result of the careful routine examinations made of each house case. Sixty per cent. of the cases of vaginitis were so mild as to have escaped clinical observation had it not been for the severe examination.

Holt then had other children's institutions in New York carefully examined, and found in all the condition was as bad or worse than in the Babies' Hospital.

He concluded that gonococcus infections, especially vaginitis, are extremely frequent in institutions for children, highly contagious and very difficult to control.

With regard to the clinical manifestations, Holt states that the three principal forms are vaginitis, ophthalmia and arthritis. The cases were all under three years of age. Only one case of gonococcus urethritis in a male was seen, he was two years old and was admitted with the disease. A clear history of infection, at his home, was obtained. There were no

cases of endocarditis, pericarditis, peritonitis or pelvic inflammation, and none of proctitis.

Vaginitis, when well marked, is easy of detection, but in mild cases which are kept clean, it is very difficult to detect, and may remain unnoticed for some time. Constitutional symptoms, even in severe cases were few and insignificant. Urethritis was uncommon and seldom severe.

The ophthalmia was as is usual in infants.

Arthritis was encountered in 26 cases, 19 being male and seven females. Four of the females had vaginitis, while in only one of the males was there other clinical evidence of gonococcus infection, *i.e.*, ophthalmia. Sixteen of the cases were under three months of age. A single joint was involved in but five cases. In most cases four or five joints were affected. The finger, metacarpal and ankle joints were most frequently attacked. The local symptoms were well marked, rapidly developing articular swelling, redness, tenderness being acute, and supuration occurring within a week. The pus withdrawn from the joints was always thin seropus. The general symptoms were of a pyaemic character. Fourteen cases died but in many cases the pyaemia could not be blamed, as the children suffered from marasmus.

The pathological process in the joints is an acute synovial inflammation rarely involving the cartilage or other joint structures and no destructive changes were observed.

Complete recovery followed in most cases. In a few slight stiffness remained and fibrous ankylosis was noted in only two cases.

Holt records facts to prove that this disease invariably is carried from case to case by the nurse in charge.

With regard to the port of entry in males Holt has no proof, but suggests it is the mouth, and that infection results from the nurse swabbing out the infants' mouths with a piece of cotton, wrapped around her finger tip.

No evidence was ever obtained that either nurses or servants coming in contact with the children suffered from this disease.

With regard to prophylactic measures Holt considers that two things are essential: 1. Exclusion of cases of gonococcus infection as far as possible; 2. if admitted, absolute quarantine.

In exclusion of cases a vaginal smear must be carefully examined by an expert before the diagnosis of freedom from infection can be maintained.

The quarantine to be effectual must extend to nurses and attendants, as well as to the infected cases. One difficulty is the prolonged quarantine necessary, as all cases are of a very chronic character and very resistant to treatment.

All laundry of infected cases should be separate. Swabs should consist of gauze and cotton, and destroyed after being once used. Sponges and wash cloths should be abolished.

The most scrupulous precautions should be taken with reference to the nurse's hands, by bathing in solution of disinfectants after changing each napkin. Individual thermometers are essential.

After an outbreak in a ward general fumigation should be carried out as in the case of scarlet fever.

No treatment has proved altogether satisfactory in Holt's experience.

INFANT FEEDING.

F. S. Churchill, Chicago, (*Journal A. M. A.*, May 27), discusses the embarrassments of infant feeding when breast milk is not available, and the unsatisfactory results of the common practice of diluting cow's milk with water in such cases. He summarizes practically as follows: Cases of difficult feeding in infancy are: (1) Those of fat indigestion; (2) those of sugar indigestion; (3) those of proteid indigestion. Each of these may occur alone or in combination with the others. Proteid indigestion is most common, but fat indigestion is also frequent. Each must be treated individually, the form of indigestion present must be ascertained if possible, and appropriate measures be adopted. The treatment is almost exclusively dietary; the fats and sugar can be regulated by varying the amounts of cream and sugar in the food. The composition of cow's milk, with its high caseinogen and low lactalbumen content must be remembered in treating proteid cases, the caseinogen must be cut down or eliminated, if need be, and the lactalbumen retained. This twofold object is attained by feeding whey. Increase in quantity and quality of the food must be made gradually. In conclusion, he suggests the desirability of careful study of artificially fed infants and publication of the results.

PYLORIC STENOSIS IN INFANCY.

Charles M. Scudder, Boston (*Journal A. M. A.*, May 20 to 27), reviews the literature of pyloric stenosis of infancy, and describes the symptoms, diagnosis and treatment. He recognizes two groups, the subacute or chronic, and the acute fulminating cases. While most cases are fairly typical, in some the differential diagnosis is difficult, and a careful study of each symptom and the sequence and grouping of symptoms should be made till the diagnosis is reached by a process of exclusion. He has little

faith in the medical treatment, and believes that the condition is practically hopeless without operation. The results of operations since 1898 show a saving of over 50 per cent of the cases, of which probably all would have died if let alone. An analysis of the fatal cases shows that many of them were due to mistakes or errors of technic, too late operation, etc. The operation should be rapid, free from causes of shock, sepsis or hæmorrhage, the parts to be handled gently and isolated outside of the abdominal cavity. The Loreta operation is condemned. Pylorectomy is too severe and pyloroplasty is not recommended save in exceptional cases. Some form of gastroenterostomy is best for most cases, but owing to the shortness of the infant mesentery and other reasons the anterior operation should be avoided if possible. The Finney operation of gastro-pyloro-duodenostomy may be suitable in some cases, or if not feasible, Kôcher's gastro-duodenostomy may be useful. After-care is of vital importance, and if possible an expert in feeding a baby should have charge. Absolute quiet is essential, and rectal feeding may be needed for a few days. Scudder does not discuss the etiology to any extent, but thinks that a congenital hyperplasia may occur and a spasmodic contraction of this, after birth, is frequent if not the rule.

CONGENITAL LESIONS OF THE DIAPHRAGM AND RESPIRATORY INSUFFICIENCY IN NEW BORN CHILDREN.

A. Mori, Florence, Italy, *Brit. Jour. of Chil. Dis.*, March, 1905, remarks that congenital hernia of the diaphragm is comparatively frequently encountered. The author records three cases observed in the Clinic of Pestalozza at Florence. In all three cases the placenta presented a remarkable condition of hydramnios. The liver in each case was enormously developed. The condition has generally been ascribed to an incomplete closure of the diaphragm. The author doubting this view was led to investigate the topography of the different intra-thoracic and abdominal organs in connection with the constitution of the diaphragm and the resistance of its muscular aponeurotic, and serous elements, noting at the same time the ratio of the volume and weight of the liver to the dimensions and weight of the whole foetal organism.

He concludes from his observations that diaphragmatic hernia is consequent upon increased intra abdominal pressure. The primary course of this pressure and phrenic displacement is due to an increase in volume and weight of the liver in consequence of circulatory and parenchymatous alterations of syphilitic origin.

The clinical symptoms may be explained by the pressure exercised by the displaced viscera on various organs; cyanosis, dyspepsia, intestinal obstruction, etc.

As indicative of the condition the author mentions displacement of the cardiac impulse, epigastric indrawing, enormous enlargement of the liver, detection of gastric and intestinal sounds in the thorax, and the differences between the percussion notes of the two sides of the thorax. Occasionally deficiency of expansion of one side of the chest may be noticed while the transmission to the chest wall of the gastro-intestinal peristaltic movements is frequently to be noted.

With regard to treatment but little can be done. It is rare that operative measures can be of the slightest benefit.

ACUTE PYELITIS OF INFANCY WITH REPORT OF A CASE.

R. G. Freeman, *Arch. Ped.*, March 1905, reports the case of a male infant, eight months old, fairly nourished, who suffered from some slight bowel disturbance for about three weeks, when it suddenly was taken very sick, the temperature running to 105 degrees F. It was treated for gastro-enteric symptoms for some two weeks, when, on examination of the urine, it was found to be acid and to contain a large amount of pus. Citrate of potash, $2\frac{1}{2}$ grains every two hours, with $\frac{1}{2}$ grain of urotropin every four hours, with careful regulation of the diet, which consisted of modified milk, resulted in rapid improvement. The urine planted in agar gave a pure culture of bacillus coli communis.

The author is of the opinion that the condition frequently escapes notice from the fact that the urine is not examined as a matter of routine in infants, from the difficulty in obtaining it, especially in the case of females.

TREATMENT OF MENSTRUAL PAINS OF VIRGINS.

Several days before the expected menstrual period Touvenaint (quoted in the *Therapeutic Review*, August, 1904) prescribes, three times daily, 15 drops of the fluid extract of senecio vulgaris in a hot infusion of lemons. As soon as the menstrual period appears the patient is put to bed, poultices containing laudanum applied to the abdomen, and suppositories containing 1-15 grain each of extract of cannabis indica and belladonna are inserted. Enemata containing laudanum are also advised, or 10 drops each of tincture of viburnum prunifolium and piscidia erythrina is given four times daily in a hot infusion. For the lumbar pains friction is used with:—

Chloroform, 10 grammes;
Oil of musk,
Essence of cloves, aa 5 grammes;
Ether, 15 grammes;
Alcohol, 90 grammes.

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EDITORIAL.

THE PROPOSED NEW PROVINCIAL HOSPITAL IN TORONTO.

No doubt our readers are well aware of the main facts in connection with the New Provincial Hospital movement.

The Ontario Legislature voted \$300,000 towards bettering the hospital facilities in Toronto for clinical teaching. This money to go into the present General Hospital, or a new Provincial Hospital provided such should be erected.

The bill also provided that the City of Toronto might give \$200,000 towards the purchase of a new site, should such be decided upon, as the General Hospital trustees came to the conclusion that it would not be expedient to build on the present site.

The proposed site in the centre of the city will exceed in value the present General Hospital site by perhaps \$300,000. This would mean a loss to the city in taxes of about \$6,000; or, at 4 per cent., the equivalent of \$150,000 in capital.

Then, again, the present income of the General Hospital is \$25,000 a year from lands given it about 60 years ago by the Government of the Province of Upper Canada. This represents a capital of at least \$650,000.

These various sums make the total of \$950,000 from the Province, and \$350,000 from the city, or a grand total of \$1,300,000.

It was felt by many members of the profession, and this view was shared in by many citizens that, if so much money of the people was put into the scheme, the new hospital should be open to any medical practitioner in good standing to attend his own patients, provided they paid for themselves.

A meeting of the medical profession was called on July 6th to discuss the matter. At this meeting, Dr. Charles Sheard, Medical Health Officer, moved the following resolutions:—

1. The material of the public wards shall be available exclusively for the Faculty of Medicine of the Toronto University, but all other accommodation in the hospital shall be equally available to all other practitioners of good standing in the city.

2. A public ward patient shall be defined as one who is unable to pay for his medical attendance.

3. The municipality of the City of Toronto to be represented upon the board of hospital trustees, numerically equal with those appointed by the Ontario Government.

4. In the new hospital accommodation is to be afforded as far as possible to patients sent in upon the city's order.

Dr. R. A. Reeve, Dean of the University Medical Faculty, seconded the above resolutions, which were carried, and it was felt that the matter was in a fairly satisfactory form, as Dr. Sheard had said in answer to a question, that he would recommend special public wards for the general profession, in order to avoid confusion in the matter of clinics.

The subject came up before the City Council on 10th July. Those representing the hospital scheme asked for the \$200,000 without conditions, and the by-law received its first and second readings to give the money unconditionally. The third reading was set down for 17th July. During the week a good deal of opposition was developed against the Council giving such a large sum without conditions.

At this meeting of the Council, Controller John Shaw moved, seconded by Alderman Dr. Harrison, as follows. "But the proceeds, or any portion of the money so raised, shall not be paid over by the City Treasurer until the new hospital trust is formed with city representation thereon, consisting of at least two appointed by the City Council, and then only when the new board so formed shall undertake to allow or permit all patients paying their way in the new hospital the right of employing their own surgeon or physician, and shall undertake that accommodation shall be afforded in the new institution, as far as possible, to patients sent in on the city's order."

After a good deal of discussion this was carried by 14 to 8 on the following division: For—Controllers Shaw and Ward and Aldermen Fleming, Harrison, Chisholm, Lynd, McBride, Coatsworth, Stewart, Vaughan, Noble, Dunn, Graham and McGhie; Against—Mayor Urquhart, Controllers Hubbard and Spence, and Aldermen Hay, Geary Church, Keeler and Jones.

Alderman Geary moved that the words, "Subject to the regulations of the hospital board," be added to the clause permitting patients paying their way to employ their own doctor. This was agreed to.

Legal opinion has been secured to the effect that, regardless of the ward or the hospital charges therefor, all patients who pay their own way will enjoy the privilege of selecting their own medical attendants, whether on the staff of the hospital or not. It makes no difference whether the charges made by the hospital board be adequate to de-

fray all the costs of maintenance, provided the patients pay what is demanded from them, they possess the right of choice as to doctor.

The above are the simple facts, so far as we have been able to gather them by watching the progress of events during the past two months.

THE INCREASE OF INSANITY.

There appears to be good grounds for the general belief that insanity is on the increase. So far as Canada is concerned, Dr. Burgess, in his address at the American Medico-Psychological Association, made this quite clear. The report of the Inspector of Asylums for Ontario also emphasizes this same fact. In 1884, there were 8 insane to every 5,000 of the population; but in 1904, there were 14 to every 5,000. The average daily number in the asylums in 1884 was 2,867, and in 1904 it had increased to 5,500.

The report condemns the custom of confinement of the insane in jails. It suggests that some small, but separate building be erected for these cases.

The revenue for 1904 was \$106,167, and twenty years ago it was \$48,135. Since Confederation Ontario has expended upon these institutions \$16,000,000.

Housekeepers head the list of occupations, 296 patients having succumbed to the monotony of the daily round. Laborers come next, with 124, and farmers close up with 122; domestic servants are next, with 46, clerks 14 and carpenters 13.

Of mental causes of insanity, worry comes first, with 70 cases, domestic troubles 43, adverse circumstances 39, fright and shock 22, love affairs 15, religious excitement 7. Intemperance in drink heads the list of physical causes, with 50. overwork being next, 37. The married admitted during the year were 462; the unmarried 496.

THE CANADIAN MEDICAL ASSOCIATION.

We wish to call attention to the meeting of the National Association this year at Halifax, on August 22nd, 23rd, 24th and 25th. It is just twenty-four years since the Association met in Halifax. The President, Dr. John Stewart, in behalf of the profession of Halifax and the east, invites all to attend and partake of the pleasures of a trip to the Maritime Provinces, and the hospitality of the people down by the sea. We hope to see this the largest meeting in the history of the Association.

THE TREATMENT OF MENTAL DISEASES IN HOSPITALS.

This subject is again taken up by Dr. Campbell Myers. He strongly advocates the treatment in general hospitals of early cases of nervous and mental diseases. He contends that many of these patients would recover and thus escape the stigma of having been in an asylum. He points out that in some countries this is now becoming a common practice. It is stated that the results, so far, have been very satisfactory. It would enable nurses and students to become more familiar with this class of patients. Those whose minds become unbalanced could be admitted at once without certificate, and placed under observation. Many suicides would also be prevented. It would be valuable from an economic point of view also.

CHANGE THE NAME "ASYLUM."

As the name originally comes to us through the usages of good writers, there should be no objection to it; but in practice there has grown up a strong feeling in the mind of the public against sending persons to an asylum. It is thought to be a stigma on those who are committed and upon their friends. The name could, therefore, be changed to one less objectionable, such as "Hospital for Nervous Diseases." This would remove, also, one of the grave difficulties in the minds of those who require commitment as they often say, "don't send me to the asylum."

A COMMISSION IN LUNACY.

In all our asylums the principle which should govern appointments is the one of fitness for the positions to which these persons are appointed. At the present moment there are in Canada 18 asylums for the insane, and 12 of these are under political control..

In New York, the superintendent is chosen by the board of management, and must have had at least five years experience in the care of the insane and asylum work. He, in turn, selects his assistants. In this way a more efficient service is secured than when the medical staff of an asylum owes its appointment to political influences.

This would introduce into the asylums of the country the principle of promotion as the reward of faithful and efficient service. It would also tend to introduce a more scientific spirit. If appointment in the first

place and promotion afterwards came to a person because he had done good work along the lines of mental and nervous diseases, or had shown his special fitness for the management of such cases, there would be better hope for the advancement of knowledge on the many phases of insanity.

What the taxpayer, the patients and the profession is entitled to is the best result for the cost of maintaining these institutions. That this could be secured by the creation of a Lunacy Commission as compared with the present system, there can be no doubt. Such a commission would take over the care of the insane, would appoint the medical superintendents, and, along with him, the assistants. Appointments would be made on merit, and retention in the service would depend on the quality of work done. Under such a system our asylums would be heard from as true centres of research and scientific progress.

THE SCIENCE OF PROLONGING LIFE.

The highest duty of the state is to protect its people, and there is no form of protection so important as the protection against disease.

In the case of consumption there are at least 8,000 deaths annually in Canada from this disease in its ordinary form, not considering the many forms of tuberculosis of various organs. And yet this disease is a preventable one. Why not prevent it then? It comes in the duty of the state. These cases should be reported and placed under proper instruction and safeguards thrown around those who are affected.

At the recent meeting of the Ontario Medical Association, Dr. Charles J. Hastings, of Toronto, read a very able paper on the enormous waste of life among children. Though he said nothing new, it was most timely to have such a careful presentation of all the facts. There is absolutely no need for such a high infant mortality. It can be reduced, it ought to be reduced, it must be reduced. The question comes in "How can it be reduced?" We think along the lines suggested by Dr. Hastings. There should be a medical inspector of public schools. He would travel the province over, and would inspect the schools from the sanitary point of view and the children from their health standard. Much information would be gathered as to cases of neglect and proper steps could be taken to remedy these. Proper literature could be prepared and distributed throughout the schools.

Some steps have recently been taken looking towards the early and more efficient care of the insane. This should appeal to all. There are many instances where it would be well to have a short probation period before formal commitment to asylum takes place. The care of

such cases would be much more expensive, however, than that of the ordinary run of patients. To aid the general hospitals of the province in this work, the Government might arrange for a special allowance to such patients for a short period. The Government grant is now 17 cents per day. It might be made large enough, along with the municipal grant, to bring the receipts from such patients up to a paying level to the hospitals. If this were done, a most beneficent work could at once be commenced.

Another subject of much importance is engaging the minds of many public spirited and charitable people—the treatment of inebriates. For the society which has undertaken the task of caring for this class, we wish the best success. It is to be hoped that those who have the means at their disposal will come forward and give aid to such an extent as will enable the society to commence at once the treatment of those who suffer from the effects of intemperance. Already a start is being made, and there is no doubt the movement will gain strength.

CANADIAN MEDICAL ASSOCIATION.

The following is the *Preliminary Programme* of the meeting of the Canadian Medical Association to be held in Halifax, N.S., August 22nd to 25th, 1905:

President's Address, Dr. John Stewart, Halifax; Address in Surgery, Dr. Francis M. Caird, Edinburgh, Scotland; Address in Medicine, Dr. D. A. Campbell, Halifax; Address in Gynecology, Dr. Howard A. Kelly, Baltimore; Address in Ophthalmology, Dr. J. W. Stirling, Montreal; Discussion on Renal and Ureteral Surgery, Introduced by Dr. A. Primrose, Toronto; Two cases of Retro-Ocular Neuritis, Dr. Geo. H. Burnham, Toronto; Paper, (title to be announced), Dr. H. A. Bruce, Toronto; The Symptoms, Diagnosis, Prognosis and Treatment of Neoplasms Affecting the Central Nervous System, Dr. D. A. Shirres, Montreal; Chorea, with an Analysis of 130 cases, Dr. Robert King, Halifax; Rare Forms of Aneurysm, Dr. Maude E. Abbott, Montreal; The Buried Suture, Dr. J. M. Elder, Montreal; Dentigerous Cysts, or the Removal of the Inferior Dental Nerve for Tic, Dr. M. C. Smith, Lynn, Mass.; Combination Operation for the Radical Cure of Inguinal Hernia, Dr. F. N. G. Starr, Toronto; Two case reports, (1) A case of Chylo-Thorax, (2) Further Notes on a Case of Myelogenous Leukaemia, with Disappearance of the Splenomegaly and Myelocytes, Dr. D. G. J. Campbell, Halifax; Physical and Clinical Researches of Radium, Dr. Myron Metzenbaum, Cleveland, Ohio; Prostatectomy, Dr. E. W. Cushing, Boston, Mass.; The Surgery of the Stomach in Non-Malignant Conditions, Dr. G. E. Armstrong, Montreal; Dislocations, (with a lantern demonstration), Dr. J. Alex. Hutchison, Montreal; The Fever of Late Syphilis, Dr. Arthur Birt, Berwick, N.S.;

Postural Albuminuria of Children, Dr. W. H. Eagar, Halifax; The Prodromata of Insanity, Dr. W. H. Hattie, Halifax; The Treatment of Smallpox without Pitting, Dr. Archibald Leitch, St. Thomas, Ont.; Tracheotomy as a Remedy in Severe Whooping Cough, Dr. A. B. Atherton, Fredericton, N. B.; Recent Fracture of the Clavicle, with Operative Treatment, Dr. J. W. T. Patton, Truro N.S.

In addition to the foregoing several have promised papers, but have not yet decided upon the title of same.

DR. J. N. E. BROWN CHOSEN.

The Board of Trustees of the Toronto General Hospital has appointed Dr. John N. E. Brown superintendent of the hospital in succession to Dr. Charles O'Reilly. The appointment came as a surprise to Dr. Brown, as well as to many friends of the hospital, who believed that an accountant rather than a physician would be chosen to deal with its affairs. It is generally admitted, however, that Dr. Brown is an ideal choice. He has been absent from Toronto for some years, having gone to the Yukon Territory shortly after the great gold discoveries there. He became Medical Health Officer of Dawson City, undertaking a task of no light dimensions when it is remembered that Dawson City sprung up like a mushroom, and was populated by the offscourings of the earth. Then he became Territorial Secretary of the Yukon Territory. Last winter on returning to Toronto he went to Johns Hopkins University, Baltimore, for a season of experiment and study. Dr. Brown is by no means unfamiliar with hospital work, having been for a time chief obstetrician at St. Michael's Hospital. He is the husband of the well known newspaper writer, "Faith Fenton," whom he married at Dawson City. We hope Dr. Brown may fill the position as long as did his predecessor and leave it with as many kind wishers.

DEATH RATE SHOWS SLIGHT INCREASE.

The returns made for June to the Provincial Board of Health of cases and deaths of infectious diseases, including deaths from all causes are the most complete in the history of the department since the Act came into force in 1897, requiring municipal clerks to make monthly returns. Out of 777 division registrars in the Province, 760 have complied with the regulations and made returns, representing a reporting population of 2,059,515, being 90 per cent. of the Province.

The total deaths from all causes are 1,933 or 31 more than for June last year, but this may be accounted for through 30 more division registrars having reported than in June a year ago, and it is pleasing to know the death rate per 1,000 is no higher, being 11.2 for both periods.

In the table of infectious diseases appended it will be noticed that measles have become very prevalent as compared with the same month last year, there being no less than 420 cases reported, with 11 deaths, or twice as many as that caused by scarlet fever. Diphtheria caused four more deaths, although the cases reported are 45 less, which makes a case mortality of 18.8.

The extent to which tuberculosis prevails in the Province is very great when it is considered it has caused 207 deaths, or 83 more than all other infectious diseases. It is to be regretted that so few municipalities have taken advantage of the Act respecting municipal sanitaria for consumptives, and assist those unfortunate people who are victims of this most insidious disease. Meanwhile the disease continues its onward course, carrying off its hundreds each month.

The following comparative table shows the number of cases of infectious diseases for June last, as compared with the same month of last year :—

Disease.	1905.		1904.	
	Cases.	Deaths.	Cases.	Deaths.
Smallpox.....	19	0	40	1
Scarlet Fever... ..	96	5	136	5
Diphtheria.....	212	40	257	36
Measles.....	420	11	41	1
Whooping Cough... ..	40	8	46	9
Typhoid.....	43	19	40	15
Tuberculosis.....	210	207	212	196
Total.....	1,040	290	772	263

A death rate of about 20 per cent. is surely too high for diphtheria. The early administration of antitoxin should reduce this rate to almost zero. We fear that in some poor patients this potent remedy is not employed, and think that the municipality which denies to a poor child the benefit of antitoxin is as censurable as would be a surgeon who allowed a patient to bleed to death without making an effort to arrest the hæmorrhage.

PERSONAL AND NEWS ITEMS.

Dr. J. L. Anderson, formerly of Cannington, has decided to locate at Waterford, Ont.

Dr. Kippen, late of Manitoba College, is practising his profession in Dubuc and vicinity.

Dr. J. R. O'Brien, of Ottawa, has gone to Britain. He will visit the hospitals there and in Paris.

Dr. James A. Cowper and Miss Viola Ball were married in Holy Trinity Church, Welland, on June 22nd.

Dr. Barrett, of Renfrew, has purchased Dr. Hughes' practice in Galt, as the latter is removing to Toronto.

Dr. and Mrs. Matheson have sailed from Montreal, for a trip in England, Holland, France, Germany, Austria and Italy.

Dr. Dunn, of Beeton, who sold his practice to Dr. Hodgson, of Beaverton, a short time ago, intends going to Edmonton.

Dr. and Mrs. Murray McFarlane, of Toronto, have gone to California and Oregon. They will return about the end of August.

Dr. G. E. L. Mackinnon, late of Williamstown, has received the appointment of house surgeon in the Royal Victoria Hospital.

Dr. F. E. McLoughlin, of Hamilton, was recently married to Miss Downey of Toronto. He will continue his practice in Hamilton.

Dr. Wm. Read has taken over the practice of the late Dr. E. Harvey, of Wyoming, and will take up his professional work there this week.

Dr. John F. Armstrong, of Oil Springs, who was at one time connected with the staff of the London Asylum, was recently married to Miss Sarah Murdoch, of London.

Dr. Harold W. Dingman, Toronto, a former Pictonian, who is visiting in town, has left for Saginaw, Mich., where he will enter St. Mary's Hospital as house physician.

Dr. A. E. McLaughlan, of Toronto, has located in Desboro. The field recently supplied by Dr. Pickard will find in Dr. McLaughlan a worthy and skilled successor.

Dr. Costello who was recently visiting friends in Arnprior, Ont., returned to Calgary to open a practice. He is the late house surgeon of the Water Street Hospital, Ottawa.

The marriage of Dr. Georges A. Sutherland, of Embro, to Miss Jeanette Munro, daughter of Col. James Munro, M.P.P., took place on Wednesday, the 26th of July.

Dr. Wm. Hendry has been appointed senior house surgeon of the Toronto General Hospital, in succession to Dr. Rountree, who leaves this week. The appointment is for six months.

Dr. Jackson, who has been surgeon at the Home for Incurables, Toronto, during the past year, will conduct Dr. Bowles' practice at Woodhill while the latter is absent in England.

Dr. Wilmot Graham, son of ex-Ald. R. H. Graham, has returned from Edinburgh, where he passed his examinations last month and will spend the summer at his parents' cottage, Port Carling.

The resignation of Dr. Langrill as Medical Health Officer, he having been appointed recently as medical superintendent of the City Hospital, Hamilton, was accepted by the City Council 26th June.

Dr. Irving Cameron, of Toronto, is among the prominent medical men who will this month be admitted Honorary Fellows of the Royal College of Surgeons at the quarter-centenary celebration in Edinburgh.

Mr. John Ross Robertson has given \$75,000 for the erection of a Nurses' Home in connection with the Hospital for Sick Children, Toronto. This is much needed and will be much appreciated.

Dr. Bright, of Drayton, was married on July 13th to Miss Estella Gunn, a graduate nurse of the Toronto Western Hospital, and for some time lady superintendent of the Royal Alexandria Hospital, Fergus.

Dr. Roberts' application for the position of Medical Health Officer, made vacant by the appointment of Dr. Langrill as superintendent of the City Hospital, has been favorably considered by the Board of Health of Hamilton.

The marriage of Miss Eva Maude Pettit, daughter of Mr. Richard Pettit, and Dr. Alexander Dufferin Stewart of Fort William, took place at Glenwillow, Middlesex County, the home of the bride's parents, on Thursday, the 22nd June.

Dr. C. C. Elliott, who is leaving Wardsville in the fall, has disposed of his practice to Dr. A. G. McMillan, a graduate of the Western University, who during the past year was senior house surgeon at St. Joseph's Hospital, London.

The Board of the Sick Children's Hospital have appointed the following gentlemen as house surgeons from July 1: Dr. Black, Dr. Strathy and Dr. Spohn. Dr. Bennett will take up an appointment as house surgeon at the institution on January 1.

Hon. Dr. R. A. Pyne, Minister of Education, left, July 19th, for England. While away he will make a study of the board school system, as well as of the various educational institutions. Dr. Pyne expects to be absent about six weeks.

On Wednesday, June 14th, at the Octagon, Bowmanville, the home of the bride's parents, Miss Mabel A. Tait, eldest daughter of Henry C. Tait, Esq., was united in marriage with Dr. J. H. Elliott, Physician in charge of the Muskoka Cottage Sanatorium, Gravenhurst.

Dr. A. C. Sinclair, formerly of Rossland, has decided to make his residence in Vancouver, B.C., and practise his profession there. Dr. Sinclair is widely known in the Dominion both in medical and political circles. Before he moved to the West he was a member of the House of Commons.

A very pretty house wedding took place at the home of Mr. and Mrs. John Reycraft, Victoria avenue, Ridgetown, on Wednesday afternoon, June 28th. The bride was their daughter, Miss Bertha, recently of the Moulton Ladies' College staff, Toronto, and the groom, Frank C. Neal, M.B., M.R.C.S., L.R.C.P., of Peterborough.

The Board of Hospital Governors of the Hamilton City Hospital met at noon to-day and agreed to go on building the new wing to the hospital. The total cost was figured at \$44,170, not including the installation of a central heating plant or elevators in the new building. Contracts were let, subject to favorable consideration by the City Council.

Dr. R. J. Manion, of Fort William, who has been house surgeon in the Water Street Hospital, leaves for his home after having spent a year at that institution. He will remain in Fort William but a few weeks, when he intends going to England. His associate at Water Street Hospital, Dr. Nagle, leaves also and will go to Almonte, which is his home.

Dr. J. W. Rowntree temporarily received the appointment to the position of medical superintendent of the Toronto General Hospital, vacated by Dr. Charles O'Reilly. Dr. Rowntree is a native of Thistletown, Ont., and was born in 1877. He was educated at Weston, the Toronto Junction High School, and Trinity Medical College, graduating M.D. in 1903. He has been on the house staff of the General Hospital for a year.

A very representative gathering of residents of Alberni and district to the number of forty sat down to dinner at the Arlington Hotel on Friday evening, June 9th, at the farewell banquet to Dr. Ross, formerly of Rossland and Nanaimo, who after four years' residence there has left to seek professional success in the larger field of Vancouver city. An address to Dr. Ross, expressive of the sentiments of the community, was read and presented to him.

Dr. Bruce Smith, inspector of Asylums and Prisons, has returned from a tour of inspection of those institutions in the eastern part of the Province. During his absence he visited the hospitals, asylums and jails at Perth, L'Orignal, Smith's Falls, and Brockville. A fact which attracted the attention of Dr. Smith was the few insane persons confined

in the jails and in that part of the Province. In Toronto jail there were at this time last year 36 lunatics, at present there are only three.

The Northern Alberta Medical Association, at a recent meeting, elected the following officers:—Honorary President, Dr. McInnis, Edmonton; President, Dr. Harrison, Edmonton; Vice-president, Dr. McIntyre, Strathcona; Sec-Treasurer, Dr. T. H. Whitelaw, Edmonton; Committee, Drs. Wilson, Smith and Clendenan, all of Edmonton. The Association meets on the first Thursday of each month at Edmonton. The Association is a very active one and will undoubtedly have a decided influence in the West.

OBITUARY.

P. L. PHILIP, M.D.

The death occurred on July 10th of Dr. P. Leslie Philip of Brantford, at the age of 69 years. Deceased was one of the best-known practitioners in the province, but owing to a stroke of paralysis had not practised during the last two years. He was unmarried.

C. G. LARGE, M.D.

The death occurred at the Brandon Hospital, on 5th July, of Dr. C. G. Large, of Sinclair, Manitoba. The deceased gentleman was widely known in that province and had many friends and acquaintances in Brandon, where he was a frequent visitor. For several years Dr. Large practised in Alexander, and from there he went to Griswold, but for some time past his home has been at Sinclair. He was highly esteemed for his personal qualities and for his ability and skill as a physician.

T. G. JOHNSTON, M.D., M.P.

The late, Dr. Johnston of Sarnia, was the son of T. W. Johnston, M.D., who came to Canada in 1832 from the north of Ireland and settled on a farm in Moore township, Lambton County. The father adopted medicine as a profession and studied at Louisiana Medical College, graduating as a physician after four years in that institution. He began his

practice in Sarnia, where the son was born August 4th, 1849. Dr. Johnston, Sr., was in his latter years Registrar of Lambton County. The son received his education at the public and grammar schools, Sarnia, and at McGill University. He entered the medical department of the latter institution in 1867 and graduated M. D. four years later. He succeeded to his father's medical practice in Sarnia and carried it on successfully. He assisted in the establishment of a general hospital in that town. The late Dr. Johnston was an active participant in public affairs. During two terms, 1896 and 1897, he was Mayor of Sarnia and was for four years a member of the School Board. He also served in the Municipal Council several years. When a vacancy in the representation of West Lambton occurred owing to the elevation of the late Judge Lister to the Bench, Dr. Johnston was the choice of the constituency in 1898. He was re-elected at the general election of 1900 and 1904.

The late Dr. Johnston always took an active interest in militia affairs and served as member of the Lambton provisional battalion during the Fenian Raid of 1866-'67, receiving a medal for his service. He was a member of the Church of England, was identified with the Masonic body, R. A. M., Knights Templar of St. Simon of Cyrene, Scottish rite, and Consistory at London, and also belonged to the I. O. F. He was married in 1873 to Miss Frances, daughter of the late George Brown, of Goderich. Two sons, Kenneth and Godfrey, and three daughters were the issue of the marriage. Kenneth served in South Africa with the first Canadian contingent. About a month prior to his death he suffered from an attack of erysipelas. General blood poisoning resulted and he died in Ottawa where he was in attendance upon his Parliamentary duties.

JOSEPH B. BEDARD, M.D.

Dr. Joseph B. Bedard, a graduate of Laval University, was found dead in bed 5th July, by his father. His wife had been visiting friends in Ottawa. Deceased's brother is Deputy-Prothonotary of Montreal, and his father is a well-known notary. He was 35 years of age, and his death is attributed to heart failure.

W. W. MEACHAM, M.D.

Dr. W. W. Meacham, for many years a prominent member of the Legislature, died, July 27th, at his residence, Warsaw, after a short illness from appendicitis. The late Dr. Meacham, who was 64 years of age, removed to Warsaw four years ago from Napanee. He is survived by a family of three children—one daughter and two sons.

BOOK REVIEWS.

THE SURGICAL ASSISTANT.

A Manual for Students, Practitioners, Hospital Internes and Nurses. By Walter M. Brickner, B.S., M.D., Assistant Surgeon, Mt. Sinai Hospital, Out-Patient Department, etc. 360 pages. 123 Original illustrations and 116 illustrations of surgical instruments. New York: The International Journal of Surgery Co., 1905. Price, \$2.00 net.

This splendid manual is one of the really important books of the year, inasmuch as it fills a place in medical literature that has hitherto been unfilled. It certainly meets a wide-spread demand in a highly acceptable manner, and it is sure to attain immediate and lasting popularity.

The book is not too large for the doctor's overcoat pocket, not the nurse's satchel, yet it covers the entire subject. The first two chapters deal, respectively, with the general conduct of the assistant and the hospital interne and contain much practical sense and sound advice for young men to take to heart. Chapter three treats of assistance in examinations and dressings, fracture reductions, the manipulation of plaster-of-Paris, etc. Chapter four gives in great detail an illustrated, systematic scheme for the preparation of an operating room. Chapter five describes the immediate preparation of the patient and of the assistant himself, in which the technique of asepsis is thoroughly impressed. Chapter six is a very practical article on the anesthetist. The two succeeding chapters take up the preservation and preparation of surgical accessories and the details of "instrument handing." They are brimful of "wrinkles" and useful hints. Chapter nine describes all the various manipulations concerned in assistance at the wound, from the proper manner of holding the hands and body to the method of managing an irrigator tip. A most valuable chapter is the tenth, concerning itself as it does with those important matters that may confront an assistant left to watch a patient just after operation. Vomiting, urination, pain, the arrangement of the bed and other numerous details are succinctly dealt with, and a valuable table for differentiation between shock and concealed hæmorrhage is incorporated. The management of these and all other emergencies that may arise is given in great detail.

The second part of the book (chapters eleven to twenty-five) deals with the most commonly performed operations, describing them step by step, from the assistant's standpoint. A regional classification is here adopted. With each operation is given a list of the instruments and accessories required, and the manner of preparing them. The complete technique of intravenous infusion is accurately described.

A useful appendix to the work consists in the preliminary preparation and routine after treatment of operative cases, the various methods or preparing suture material, iodoform gauze, etc., etc., and a formulary of surgical solutions and wound applications, etc. In a second appendix are printed illustrations of general surgical instruments, thus placed to be convenient for reference.

It is a book that no young practitioner should be without, as it will prove of the greatest value to him in his everyday work. Likewise, it should be in the hands of every nurse and hospital interne. Its use will not only assure greater efficiency in everything pertaining to surgical operations but will prevent all the embarrassing delays and annoyances caused by inexperience or lack of knowledge.

AMERICAN EDITION OF NOTHNAGEL'S PRACTICE.

Malaria, Influenza, and Dengue. By Dr. J. Mannaberg, of Vienna, and Dr. O. Leichte Stern, of Cologne. Entire volume edited, with additions, by Ronald Ross, F.R.C.S., F.R.S., Professor of Tropical Medicine, University of Liverpool; J. W. W. Stephens, M.D., D.P.H., Walter Myers Lecturer in Tropical Medicine, University of Liverpool; and Albert S. Grunbaum, F.R.C.P., Professor of Experimental Medicine, University of Liverpool. Octavo volume of 769 pages, fully illustrated, including eight full-page plates. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$5.00 net; Half Morocco, \$6.00 net. Canadian Agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

This new volume in Saunders' American Edition of Nothnagel's Practice represents the latest word on the subjects of which it treats. And more than that: It is the undisputed authority on these subjects. For this American edition Dr. Ross has made many additions to the article on Malaria, so many discoveries having been made since the appearance of the original article. The articles on the Mosquito and its various relations to Malaria come from the authoritative pen of Dr. J. W. W. Stephens, of Liverpool. The Influenza and Dengue sections are equally well written. The untiring labor of the editors in preparing this work for the English speaking market is evidenced on almost every page by the lengthy and valuable editorial interpolations. This is the tenth volume in the series, and the eleventh one (that dealing with Diseases of the Kidneys and Spleen and with Hemorrhagic Diseases) is promised very soon. When the series is completed it will undoubtedly form the best practice of medicine in existence.

SAUNDERS' POCKET MEDICAL FORMULARY.

By William M. Powell, M.D., author of "Essentials of Diseases of Children"; Member of Philadelphia Pathological Society. Containing 1831 formulas from the best known authorities. With an Appendix containing Posological Table, Formulas and Doses for Hypodermic Medication, Poisons and their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetrical Table, Diet-list, Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc., etc. *Seventh Edition, Revised.* In flexible morocco, with side index, wallet, and flap. \$1.75 net. Philadelphia and London. W. B. Saunders & Company, 1905. Canadian Agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

When a work has reached its seventh edition there can be no doubt of its practical usefulness. And it is not at all surprising to us that Saunders' Pocket Medical Formulary should have attained such popularity, for we know of no similar work containing so much useful, practical, and accurate information in so small a compass. In this new seventh edition there have been added over 460 new and valuable formulas, selected from the works and private practices of the best authorities. The editor has shown rare discretion in the elimination of many obsolete formulas, inserting in their newer and better ones, embodying a large number of approved new remedies. In its new edition this Formulary is thoroughly representative of the most recent therapeutic methods, and its convenient size and mechanical get-up make it the most desirable work of its kind on the market.

ATLAS AND TEXT-BOOK OF TOPOGRAPHIC AND APPLIED ANATOMY.

By Prof. Dr. O. Schultze, of Wurzburg. Edited, with additions, by George D. Stewart, M.D., Professor of Anatomy and Clinical Surgery, University and Bellevue Hospital Medical College, New York. Large quarto volume of 187 pages, containing 25 figures on 22 colored lithographic plates, and 89 text-cuts, 60 in colors. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$5.50 net. Canadian agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

In the preparation of this book Professor Schultze had in mind the need of a work that would combine the features of a text-book with the educational advantages of an atlas. He has produced a work of great merit, and not alone the anatomist but more particularly the general practitioner will find it of constant value. Professor Schultze has presented his own methods for the study of anatomy—methods proved to be correct and practical by many years of clinical study. Throughout the work the value of knowledge of topographic anatomy in bedside diagnosis is emphasized. The many colored lithographic plates and the numerous text-cuts, sixty of which are in colors, are of exceptional excellence. Indeed, both for accurateness of detail and artistic beauty we have never seen their equal. The greater portion of the dissections from which these illustrations have been made are from the author's own preparations. Dr. George D. Stewart in editing the work has added many valuable notes.

A TEXT-BOOK ON THE PRACTICE OF GYNECOLOGY.

For Practitioners and Students. By W. Easterly Ashton, M.D., LL.D., Fellow of the American Gynecological Society; Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Octavo volume of 1079 pages, containing 1046 new and entirely original line drawings. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, \$6.50 net; Half Morocco, \$7.50 net. Canadian agents, J. A. Carveth & Co., Limited, 434 Yonge St., Toronto.

Dr. Ashton's Practice of Gynecology is a new departure in medical text-book making. The author takes up each procedure step by step, the student being led from one step to another just as in studying any non-medical subject. Nothing is assumed, Dr. Ashton in every instance not only telling what should be done, but also precisely *how to do it*. All the methods and details of technic described have been thoroughly tested by the author himself, so as to assure their value and accuracy. A very commendable feature is the departure from the old routine method of devoting a general chapter to physical examination. In place of this the author presents the examination of each organ separately before describing its diseases, thus greatly aiding the student in familiarizing himself with the technic. A distinctly original feature consists in the line drawings made especially for this work under the author's personal supervision from actual apparatus, living models, dissections on the cadaver, and from the operative technics of other authors. There are ten hundred and forty-six of these illustrations, showing the procedures and operations without obscuring their purpose by unnecessary anatomic surroundings. Definite and precise instructions are given regarding the preservation of specimens of morbid tissues and secretion, and their delivery in good condition to the pathologist. The fore part of the work, dealing with antiseptic technic, shows great care in its preparation, Dr. Ashton wisely describing only those methods which he employs in his own practice, in order that the reader may have a clear and definite conception of the subject. Very special attention has been given to the consideration of visceral injuries, and we know of no other work on gynecology or general surgery discussing this important subject with the same amount of detail. This is decidedly a work for the general practitioner as well as for the student; and a good one.

MISCELLANEOUS.

THE TREATMENT OF TUBERCULAR EXACERBATIONS.

Exacerbations are a common feature of preliminary tuberculosis, as everyone knows who has had much experience with these cases. Indeed, they are almost characteristic of the disease. A tuberculosis patient may get along quite comfortably for weeks, and even months,

without treatment, suffering very little and with little or no loss of weight. Sooner or later, however, over-exertion and error in diet or some unknown cause, brings on what seems like a bad cold or an attack of grippe or some such symptom. Then the temperature and cough grow worse, loss of strength or flesh go on rapidly and the patient either dies of the attack or makes an imperfect recovery, to go much as before the attack, but upon a lower physical plane. The more advanced the lesion, the more severe and frequent the exacerbations. In the treatment of many cases I have found that they are most successfully handled as follows:—

The patient is put to bed upon an exclusive milk and Bovinine diet, the quantity of milk and Bovinine is rapidly increased until the patient is taking from four to five quarts of milk and from four to six ounces of Bovinine each day. Under this complete and full nutrition, better results can be obtained than by any other line of treatment.—
Dr. R. D. Mussey, Ohio.

A SUCCESSFUL TREATMENT OF LEG ULCERS.

To ascertain the cause of leg ulcers is of the greatest importance. A tuberculous, diabetic or syphilitic ulcer will require much closer study as to the constitutional condition than of the local treatment. Anything interfering with the venous flow, such as constipation, must be immediately corrected, and the patient's general nutrition looked out for. The leg should be rendered surgically clean by the generous use of *sinol* soap, followed by irrigation of Thiersch solution. No matter what the cause of the ulcer may be, it is wise when possible to confine the patient to bed with the foot elevated during the course of treatment; the limb should be firmly bandaged, extending from the toes to a point several inches above the ulcer.

If possible, excision of the veins of varicose ulcer should be performed. Ulcers covered with unhealthy granulating surface or sloughing edges, should be curetted after which thoroughly irrigated with Thiersch solution and dressed every twenty-four or forty-eight hours with a hot Thiersch pack. When the surface presents healthy granulation, applications of Bovinine pure should be made, changing them three times in twenty-four hours. The most careful toilet of the limb should be made at each dressing. As a rule, the basis of all chronic ulcers is made up of an unhealthy granulating mass, consequently, it is impossible to bring about a cure until this has been removed. It will be readily appreciated that an ulcer thus covered cannot absorb, consequently the great nutritive properties contained in Bovinine cannot be effective. This mode of treatment may be applied successfully to any form of ulcer, no matter what the cause may be.—*J. Ryle, M.D., Stamford, Conn.*

ECTHOL IN STINGS FROM BEES.

Dr. W. H. Barnett, of Huffins Texas in the Alkaloidal Clinic for November 1904 says: I am satisfied that ecthol, a combination of echinacea and thuja, will prevent the sting of bees from hurting one. Take dram doses every hour for three hours before he commences to work with them. The reason for the faith that is in me is this :They used to hurt me. Last summer I was taking it for a skin disease and while under its influence I was stung by a wasp on the face and neck. When stung I started to the house to get something to stop the pain and swelling that I expected to suffer with, but instead of pain and swelling as heretofore when stung, there was no more of either than a mosquito or a gnat would cause.

INTESTINAL ULCERATION.

By A. F. FOYE, M.D., Washington, D.C.

The patient in this case was a woman 82 years old. Her trouble was of several years' standing, during which time she had been unsuccessfully treated for various forms of gastro-intestinal affections. I found that there was a great deal of pain, at times very acute, in the region of the duodenum and a careful examination of the daily stools showed a number of black crusts which, with other symptoms, indicated an ulcer. As there was much acid fermentation and gastric disturbances, I thought the use of Glyco-Thymoline would be effective and began with tablespoonful doses every three hours. The results were wonderful. Not only were the gastric conditions corrected speedily, but the pain and soreness was lessened in the duodenal tract and the quantity of black crusts in the stools greatly lessened. I had the patient under the care of a trained nurse and told her to keep up the Glyco-Thymoline treatment and closely watch the stools and report to me daily. This was done and the improvement steadily continued until after some three weeks' treatment, there was no pain or soreness and no trace of the crusts. Her appetite had returned and she could digest and assimilate her food without any distress, something she had been unable to do for a number of years. After another week or so I found that every indication pointed to a cure and discontinued the treatment. That was over a year ago. She has not had the slightest return of the bad symptoms and her general condition is remarkably good for a woman of her age. She could not have lived six months had her trouble continued. As it is, she apparently has a number of years of life before her and as Glyco-Thymoline alone was used, the inference that it saved her life is not over strong. I cannot say too much in its praise.

ANTI-KAMNIA AND ITS THERAPEUTIC INDICATIONS.

Antikamnia is an American product, and conspicuous on this account and because of the immense popularity which it has achieved, it is to-day in greater use than any other of the synthetically produced antipyretics. The literature is voluminous, and clinical report from prominent medical men in all parts of this country, with society proceedings and editorial references, attest its value in actual practice in an endless variety of diseases and symptomatic affections, such as the neuralgia, rheumatism, typhoid and other fevers, headaches, influenza and particularly in the pains due to irregularities of menstruation. Antikamma has received more adverse criticism of a certain spiteful kind, particularly directed against its origin—and because of its success—than any other remedy known; critics have seemed personally aggrieved because of its American source, and that it did not emanate from the usual "color works," but their diatribes have fallen flat as do most persecutions and unreasonable and petty prejudices. The fact stands incontrovertible that antikamnia has proved an excellent and reliable remedy, and when a physician is satisfied with the effects achieved he usually holds fast to the product. That is the secret and mainspring of the antikamnia success. It is antipyretic, analgesic, and anodyne and the dose is from 5 to 10 grains, in powder, tablets or in konseals taken with a swallow of water or wine. When prescribing Antikamnia, particularly in combination with other drugs, it is desirable to specify "in konseals," which are rich flour capsules, affording an unequalled vehicle for administering drugs of all kinds.

ENTERO-COLITIS AND CHOLERA INFANTUM.

Antiphlogistine produces results in cholera infantum that can not be obtained in any other way. Pain is reduced, restlessness is soothed and the tossing, moaning patient falls into a quiet restful sleep. And why not? A moment's thought will convince you that, since the intestines and possibly the peritoneum are inflamed, an application which so rapidly reduces inflammation in other parts of the body must have a beneficial action here. Consider also, that in this case, acting directly upon and reflexly through the solar and hypogastric plexuses, it relieves the shock which is so invariably a serious part of the symptom complex.

Apply hot to the abdomen about $\frac{1}{8}$ -inch thick and cover with absorbent cotton.

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